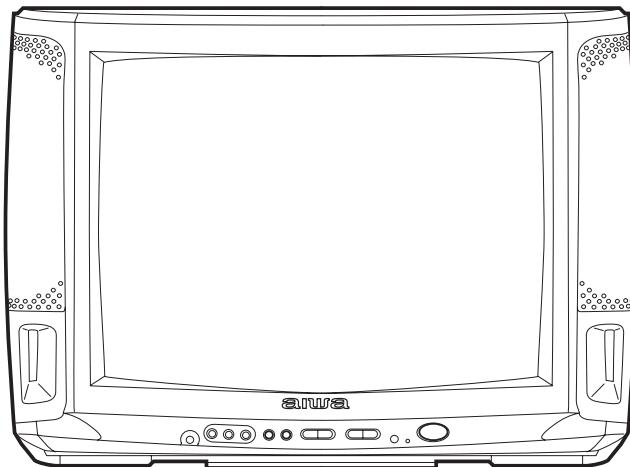




TV-S2011 U



SERVICE MANUAL

COLOR TELEVISION

aiwa
S/M Code No. 09-003-416-8S1

NOTICES BEFORE REPAIRING

To make the best use of this equipment, make sure to obey the following items when repairing (or mending).

1. Do not damage or melt the tunicate of the leading wire on the AC1 side, including the power supply cord.
2. Do not soil or stain the letters on the spec. inscription plates, notice labels, fuse labels, etc.
3. When repairing the part extracted from the conducted side of the board pattern, fix it firmly with applying bond to the pattern and the part.
4. Restore the following items after repairing.
 - 1) Conditions of soldering of the wires (especially, the distance on the AC1 side).
 - 2) Conditions of wiring, bundling of wires, etc.
 - 3) Types of the wires.
 - 4) Attachment conditions of all types of the insulation.
5. After repairing, always measure the insulation resistance and perform the voltage-withstand test (See Fig-1).
 - 1) The insulation resistance must be 1.5 to 3.0 MΩ when applying 500V per second.
 - 2) In the voltage withstand test, apply 1.2 kV for 1 minute and check that the GO lamp lights.

- * Breaking current set to 10 mA.
- * Connect the safety checker as shown in Fig-1, then measure the resistance and perform the test.
- * Do not touch the equipment during testing.
- * For details of the safety checker, refer to the supplied Operation manual.

When servicing and checking on the TV, note the followings.

1. Keep the notices.
As for the places which need special attentions, they are indicated with labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.
2. Avoid an electric shock.
There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.
3. Use the designated parts.
The parts in this equipment have the specific characteristics of incombustibility and withstand voltage for safety. Therefore, use a part which has the same character as the replaced part. Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts with a △ mark, the designated parts must be used.
4. Put parts and wires in the original position after assembling or wiring.
There are parts which use the insulation material such as a tube or tape for safety, or which are assembled so that these parts do not make contact with the printed

Insulation resistance: 1.5 to 3.0 MΩ (500 V/s)
Voltage-withstand: 1.2 kV for 1 minute

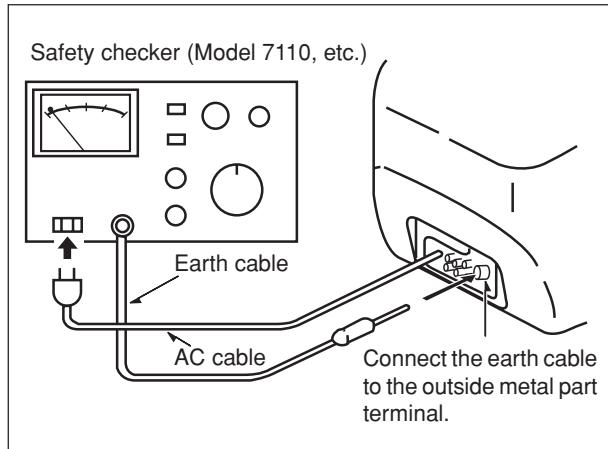


Fig-1

- board. The inside wiring is designed not to get close to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.
5. Take care of the cathode-ray tube.
By setting an explosion-proof cathode-ray tube in this equipment, safety is secured against implosion. However, when removing it or servicing from the back, it gives out shock that is dangerous. Take enough care to deal with it.
6. Avoid an X-ray.
Safety is secured against an X-ray by giving considerations to the cathode-ray tube and the high voltage peripheral circuit, etc. Therefore, when repairing the high voltage peripheral circuit, use the designated parts and do not change the circuit. Repairing, except indicates, causes rising of high voltage, and the cathode-ray tube emits an X-ray.
7. Perform a safety check after servicing.
Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are deteriorated portions around the places serviced.

⚠ Safety Components Symbol

This symbol is given to important parts which serve to maintain the safety of the product, and which are made to confirm to special Safety Specifications. Therefore, when replacing a component with this symbol make absolutely sure that you use a designated part.

DISASSEMBLY INSTRUCTIONS

1. REAR CABINET REMOVAL

- (1) Remove four screws ①, two screws ② and one ③, then remove the rear cabinet in the direction of the arrow.
(See Figure 1-1)

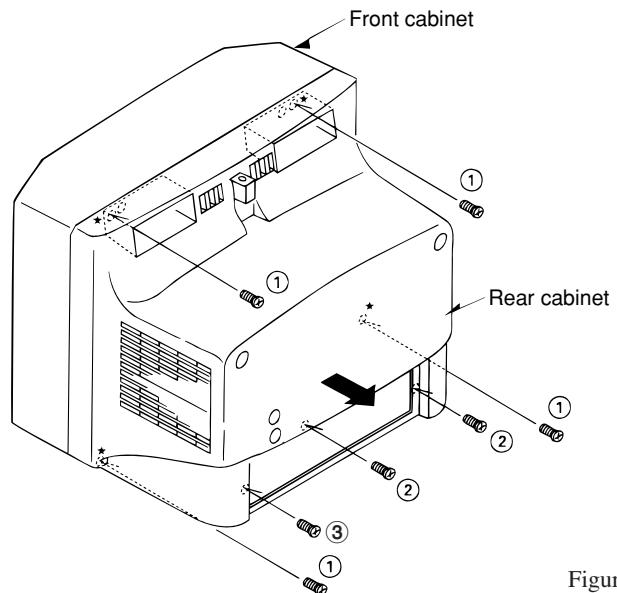


Figure 1-1

2. HIGH-VOLTAGE CAP (ANODE CAP) REMOVAL

2-1. Cautions before Removing

Discharge the anode voltage

- (1) The anode voltage is not discharged completely from the CRT of this unit even after the power is turned off. Be sure to discharge the residual anode voltage before removing the anode cap.

Do not use pliers

- (2) Do not use pliers, etc. to remove the anode cap. If you used pliers and bent the hook to remove the cap, the spring characteristics of the hook could be lost, and when reinstalled, the cap would come off from the CRT anode button easily, causing an accident.

Do not turn the anode cap

- (3) If the anode cap is turned in the direction of its circumference, the hook is likely to come off.

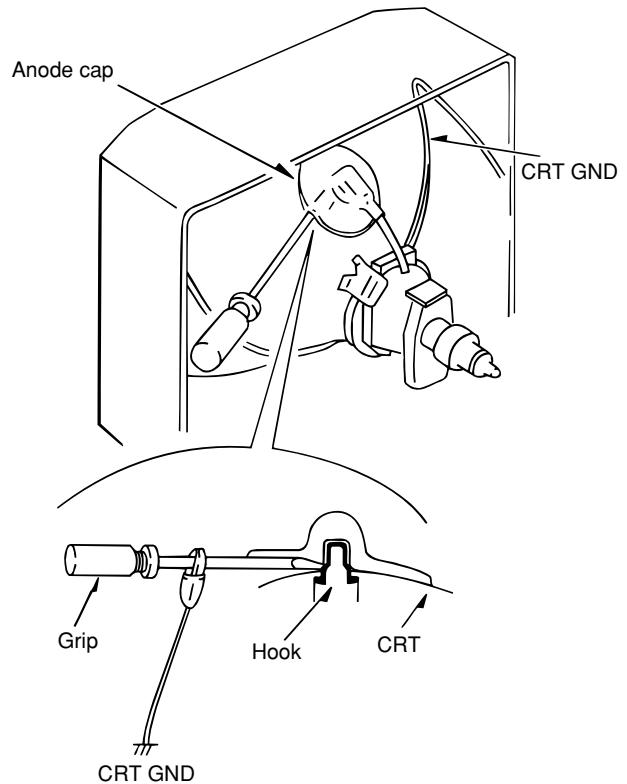


Figure 2-1

2-2. Anode Cap Removal

Discharge the anode voltage. (See Figure 2-1)

- (1) Connect a flat-bladed screwdriver to the CRT GND via an alligator clip.
(2) Use a tester to check the end of the screwdriver and ground of the TV for continuity.
(3) Touch the hook with the end of the screwdriver.
Caution : Be careful not to damage the anode cap.
(4) Turn over the anode cap.
Caution : Be careful not to damage the anode cap.

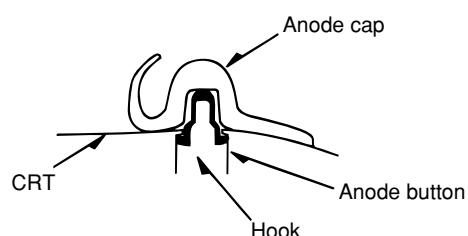


Figure 2-2

- (5) Push the anode cap with your thumb in the direction of arrow ① as shown in the figure, then lift the cap in the direction of arrow ② to release the hook on one side. (See Figure 2-3)

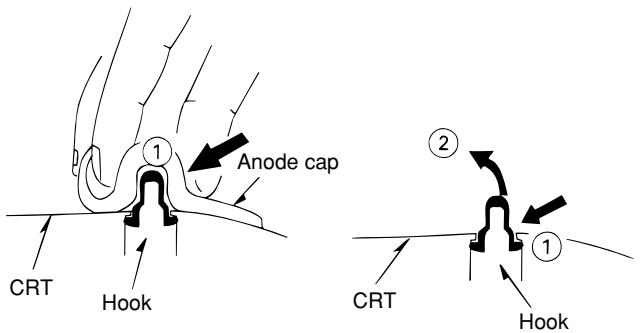


Figure 2-3

- (6) Turn over the anode cap on the side where the hook was released and pull out the cap in the direction opposite to that on which the cap was pushed. (See Figure 2-4)
Caution : Do not pull out the anode cap straight up.
 : Do not pull the cap forcibly. After removing the cap, check that the hook is not deformed.

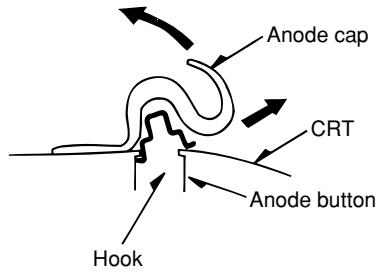


Figure 2-4

3. ANODE CAP REINSTALLTION

Observe the cautions carefully so that no accident occurs due to a defect in installing the anode cap and so it does not come off.

3-1. Caution before Reinstalling

Never turn the anode cap after installing it

Never re-use the hook when it has been deformed

- (1) If the anode cap is turned after it is installed, it may come off. Therefore, arrange the high-voltage cable before attaching the anode cap. (See Figure 3-1)
- (2) If you have attached the anode cap before arranging the high-voltage cable, arrange the cable carefully so the cap does not turn.

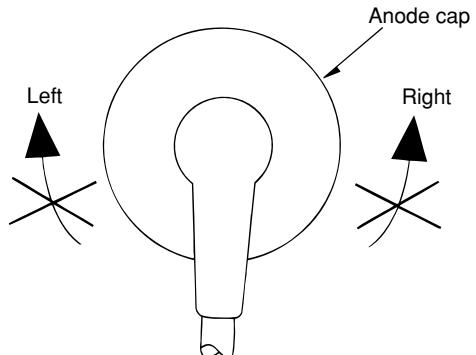


Figure 3-1

3-2. Anode cap reinstallation

- (1) Use a clean cloth moistened slightly with alcohol to clean the installation section. (See Figure 3-2)
Caution : Check that the installation section is free from dust, foreign matter, etc.
- (2) Coat the anode cap installation circumference with an appropriate amount of the specified silicone grease (KS-650N).
Caution : Be careful that silicone grease does not enter the anode button.

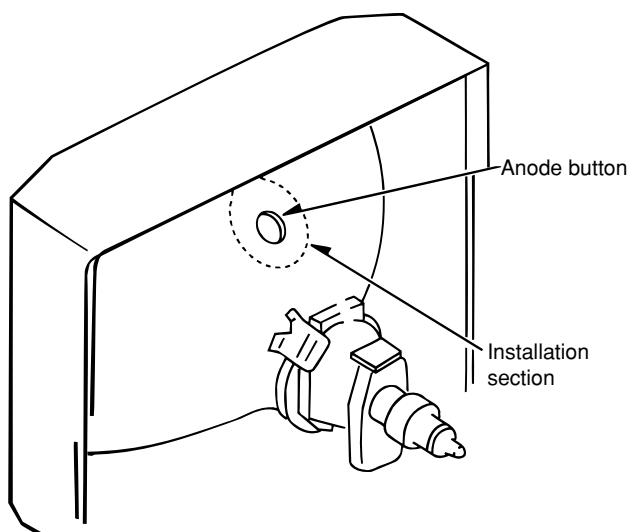


Figure 3-2

- (3) Eliminate twisting, etc. of the high-voltage cable and arrange it so that no twisting occurs. (See Figure 3-3)
Caution : If the cable is not arranged correctly, the anode cap could turn and cause an installation defect.

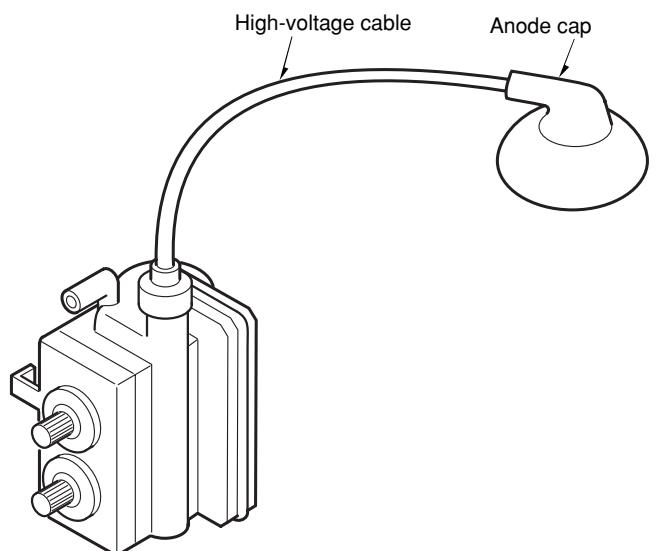


Figure 3-3

- (4) Turn over the rubber cap symmetrically on the left and right. (See Figure 3-4)
Caution : Take great care not to damage the anode cap.

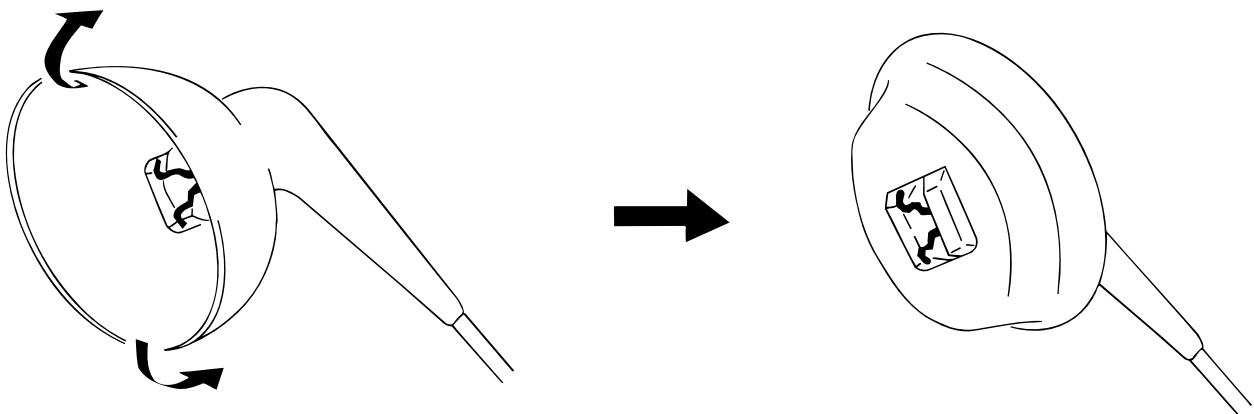


Figure 3-4

- (5) Fit your forefinger over the projection at the center of the cap and hold the cap between your thumb and middle finger. (See Figure 3-5)

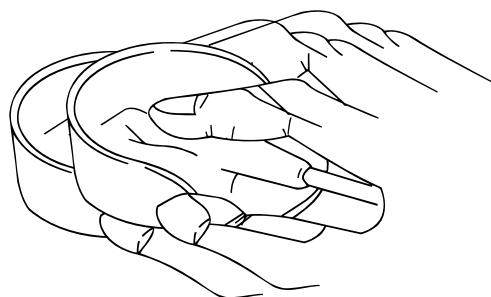


Figure 3-5

- (6) Apply the hook on one side to the anode button as shown on the figure. (See Figure 3-6)
- Caution :** Check that the hook is held securely.
- (7) Apply the hook on the other side to the anode button as shown in Figure 3-7.

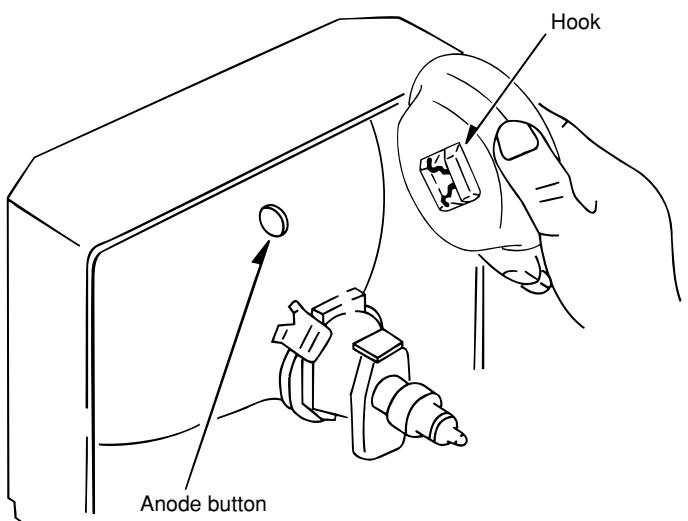
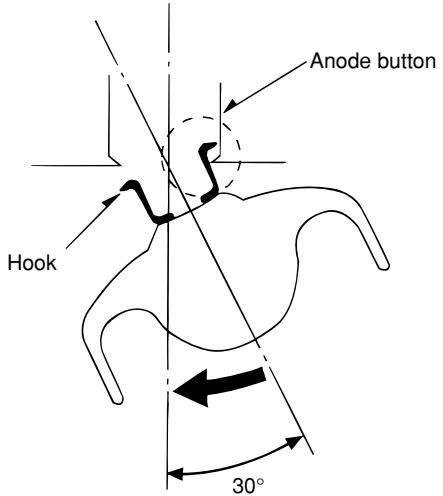


Figure 3-6

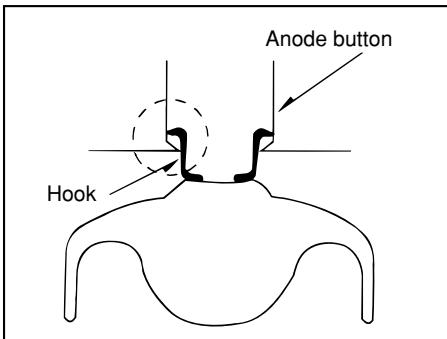


Figure 3-7

- (8) Pull the anode cap slightly with the rubber cap turned over and visually check that the hook is engaged securely.
 - (9) Release your hand from the rubber cap of the anode cap.
- Caution :** Cover the anode cap so that it does not lift.
- (10) Hold the skirt of the anode cap slightly to improve the close contact between the cap and CRT.
 - (11) Check that the anode cap is in close contact with the CRT. (See Figure 3-8)

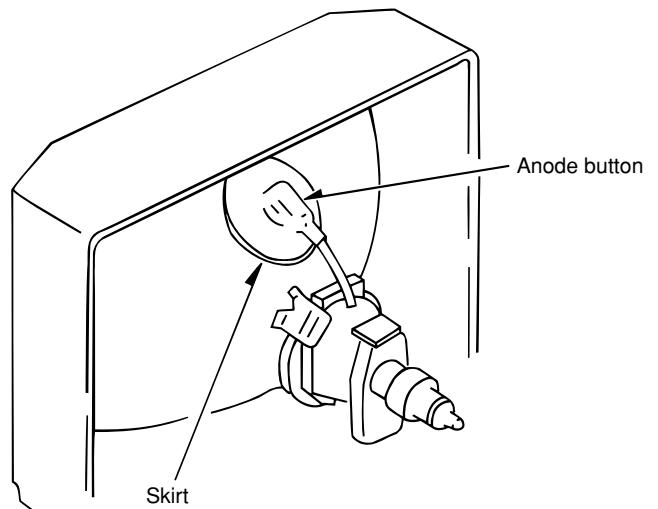


Figure 3-8

4. NK C.B REMOVAL

- (1) Disconnect CN904 (CRT GND).
- (2) Disconnect CN901, CN902.
- (3) Remove the NK C.B. in the direction of arrow ①.
(See Figure 4-1)

5. MAIN C.B REMOVAL

- (1) Remove connector (CN401).
- (2) Remove connector (CN801).
- (3) Remove connector (CN802).
- (4) Pull out the MAIN C.B. in the direction of the arrow ②
(See Figure 4-1).

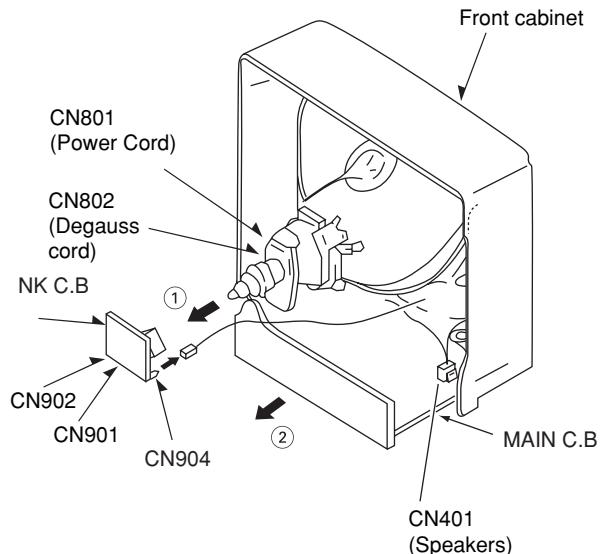


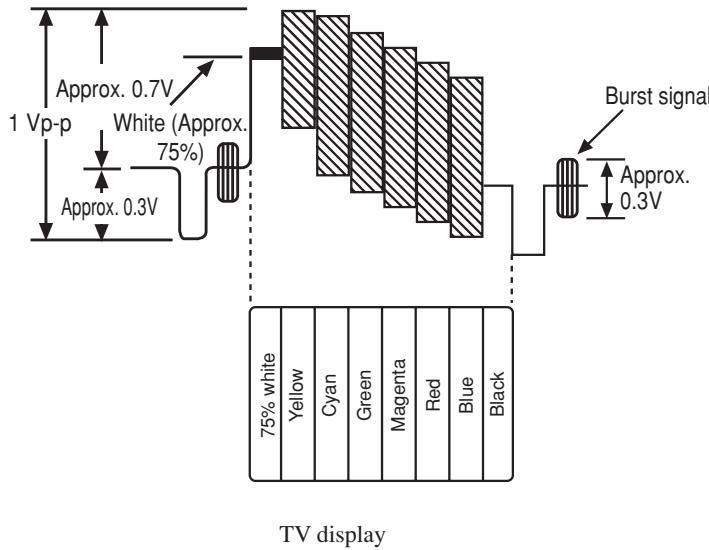
Figure 4-1

ADJUSTMENT

Set-Up For Adjustment

Because the video signal output from a pattern generator is used as the adjustment signal input during adjustment, the video signal output from the pattern generator must conform with the specifications. Measure the output waveform across 75Ω load. Confirm that the synchronizing signal has an amplitude of about 0.3 V, the video signal portion has an amplitude of about 0.7 V and the burst signal has an amplitude of about 0.3 V with flat envelope. Confirm that ratio of the burst signal amplitude and the red signal amplitude is 0.30 : 0.66. If the output signal does not conform with the specifications, calibrate the pattern generator. (Refer to pattern generator operation manual.)

Use the LEADER: LCG 404 for the pattern generator.



Color bar signal of a pattern generator

Precautions Before Starting Adjustment

Satisfy the following setting conditions before starting adjustment.

- Allow warm-up of 20 minutes or longer. (Do not turn off during warm-up.)
- Set all picture quality controls of users' setting to initial set-up, unless otherwise specified.
- Picture quality reset
 - 1. Select "Picture" on the screen menu and press enter button.
 - 2. Select "Normal" and press enter button.
 - 3. Select "Reset" and press enter button.
- Set the pattern generator's output level to 1.0Vp-p (across 75Ω load).

1. CRT Adjustment

1-1. Precautions

- (1) Receive the white raster signal, and then perform aging for at least 20 minutes.
- (2) Demagnetize the area surrounding the CRT with a degausser before making adjustments.
- (3) Set the picture quality for each mode to the factory setting.
- (4) Position the front screen facing the east as much as possible.

1-2. Purpose

- (1) Beam landing adjustment (purity magnet)

Set the left/right balance of beam landing. If there is a discrepancy in this adjustment, a color irregularity will occur. After completion of the landing adjustment, it is necessary to perform convergence adjustment.

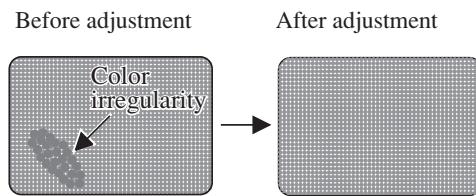
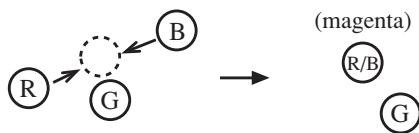


Fig. 1-1

(2) Beam convergence adjustment (4-pole magnet)

Align the R beam with the B beam. The G beam does not move with this adjustment.

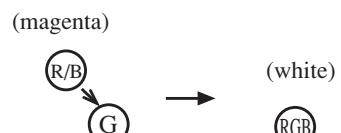


Align the R beam with the B beam

Fig. 1-2

(3) Beam convergence adjustment (6-pole magnet)

With a 4-pole magnet align the G beam with the already aligned R/B beam.



Align the G beam with the R/B beam

Fig. 1-3

(4) The composition of each magnet is as shown in Fig. 1-4.

In making adjustments, rotate the lock ring clockwise (looking from the CRT's back screen) and disengage.

Be careful not to loose the lock ring too much. If the magnet assembly has become shifted during adjustments, secure it to the position in Fig. 1-4.

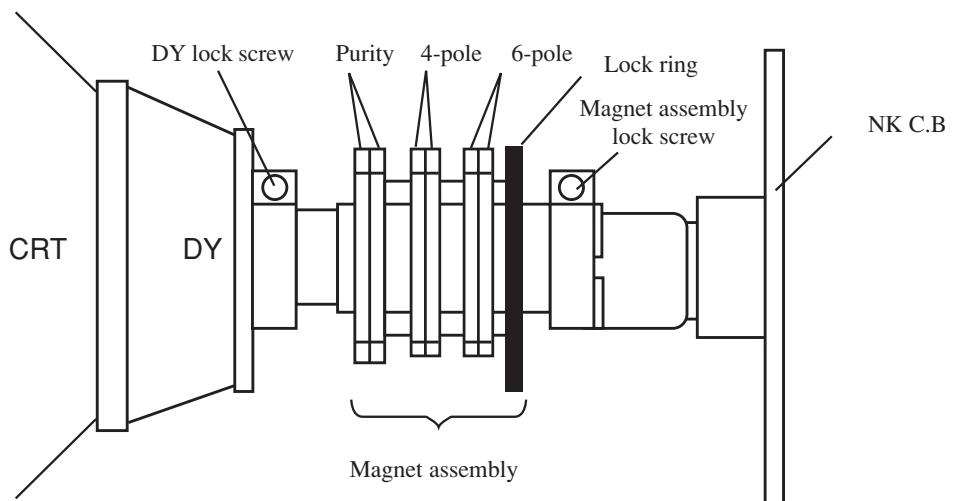


Fig 1-4

1-3. Beam Landing Adjustment

- (1) Receive the green raster signal from the pattern generator.
- (2) Loosen the magnet lock screw, and shift the magnet assembly backward (toward the neck).
- (3) Loosen the DY lock screw, and shift the DY deflecting yoke backward (toward the neck).
- (4) After opening the two purity magnets to the same angle, adjust the color width of the bands on both sides of the screen so that they are equal. (refer to Fig. 1-5 (a)).

As shown in Fig. 1-5 (b), the purity magnet functions in relation to

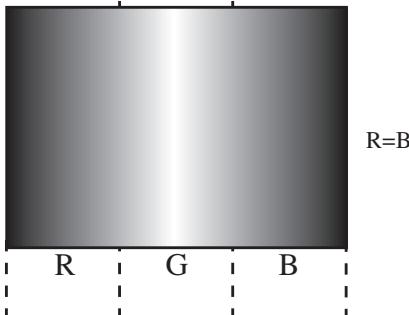


Fig 1-5 (a)

the electron beam.

- (5) Gradually shift the deflecting yoke toward the front (toward the CRT funnel). Stop movement at the point when the screen has become completely green.
- (6) Also, verify the respective monochromatics of red and blue.

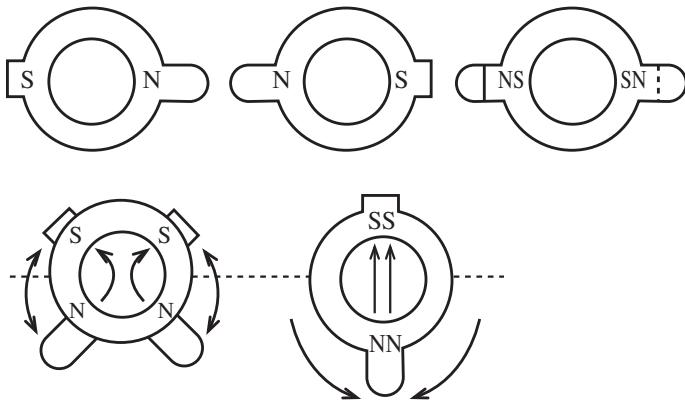


Fig 1-5 (b)

- (7) While looking at the screen, adjust the tilt of the deflecting yoke and tighten the DY lock screw.
- (8) Shift the magnet assembly to the front (toward the CRT funnel), stop movement before the adjustment position and then tighten the magnet lock screw.

At this time, be careful not to shift the position of the purity magnet.

As there is occurrence of convergence distortion after completing the landing adjustments, be sure to carry out convergence adjustments.

If the color irregularities in the screen's corner section are not improved, correct them with the landing magnet. After using the landing magnet, be sure to demagnetize the CRT with degausser and verify that there is no occurrence of color irregularity. (refer to Fig. 1-6)

Landing magnet: 81-JTI-710-010
(two-sided adhesive tape) : 80-XVI-218-010 Cushion

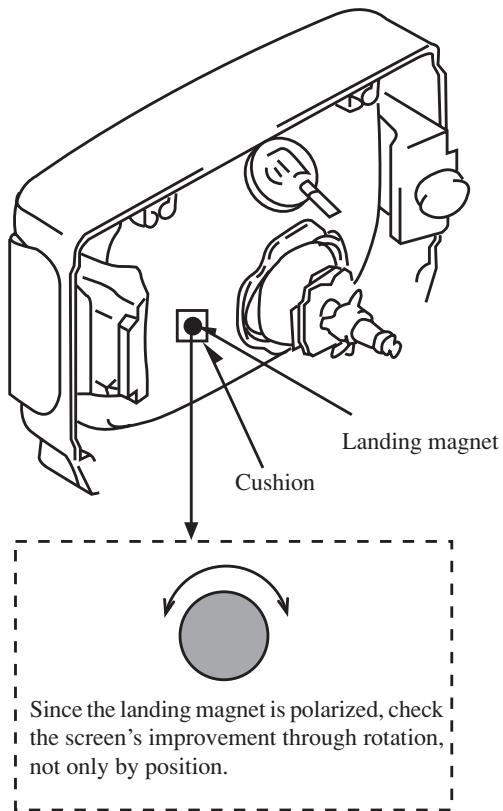


Fig 1-6

1-4. Beam Center Convergence Adjustment

Make adjustments on the convergence with 4-pole and 6-pole magnets. Operate each magnet in relation to the electron beam as shown in Figs. 1-7 and 1-8. When performing this adjustment, verify whether there is distortion in the focus adjustment. If necessary, carry out adjustments again.

In Fig. 1-7, two 4-pole magnets are stacked together so as to be of the

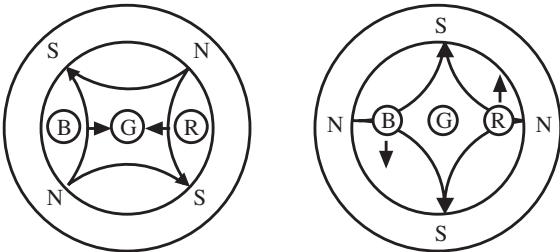


Fig 1-7

same polarity. Move the B and R beams to their respective direction, by rotating the two 4-pole magnets together. By adjusting the opening of the two magnets, it is possible to adjust the amount of the beam's movement.

In Fig. 1-8, the two 6-pole magnets are stacked together so as to be of

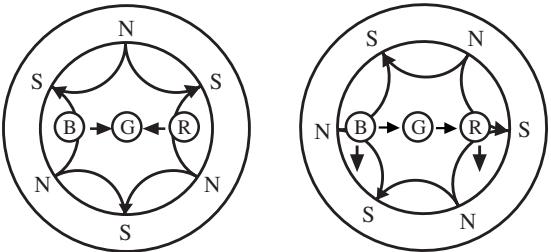


Fig 1-8

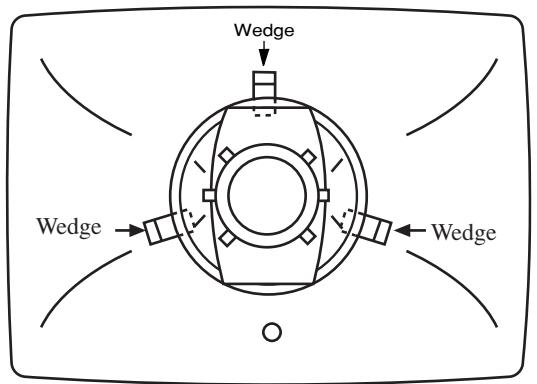
the same polarity. Move the B and R beams to their respective direction, by rotating the two 6-pole magnets together. By adjusting the opening of the two magnets, it is possible to adjust the amount of the beam's movement.

- (1) Receive the dot pattern signal from the pattern generator.
- (2) Pay attention to the center of the screen, and perform adjustments with two 4-pole magnets so that the R beam and B beam are perfectly aligned and become a magenta color.
(Refer to Fig. 1-2)
- (3) In the same way, pay attention to the screen, and perform adjustments with a 6-pole magnet so that the magenta beam and G beam are aligned and become a white dot.
(Refer to Fig. 1-3)
- (4) After adjustments are completed, secure all magnets with the lock link. (Refer to Fig. 1-4)

1-5. The Surrounding Convergence Adjustment

Perform this adjustment after completion of adjustment 1-4.

- (1) Shake the deflecting yoke up, down to the right and left, and adjust any discrepancies in the screen's surroundings.
- (2) Insert wedges in three locations in the gap between the deflecting yoke and the surface of the CRT funnel in order to secure the deflecting yoke. (Refer to Fig. 1-9)

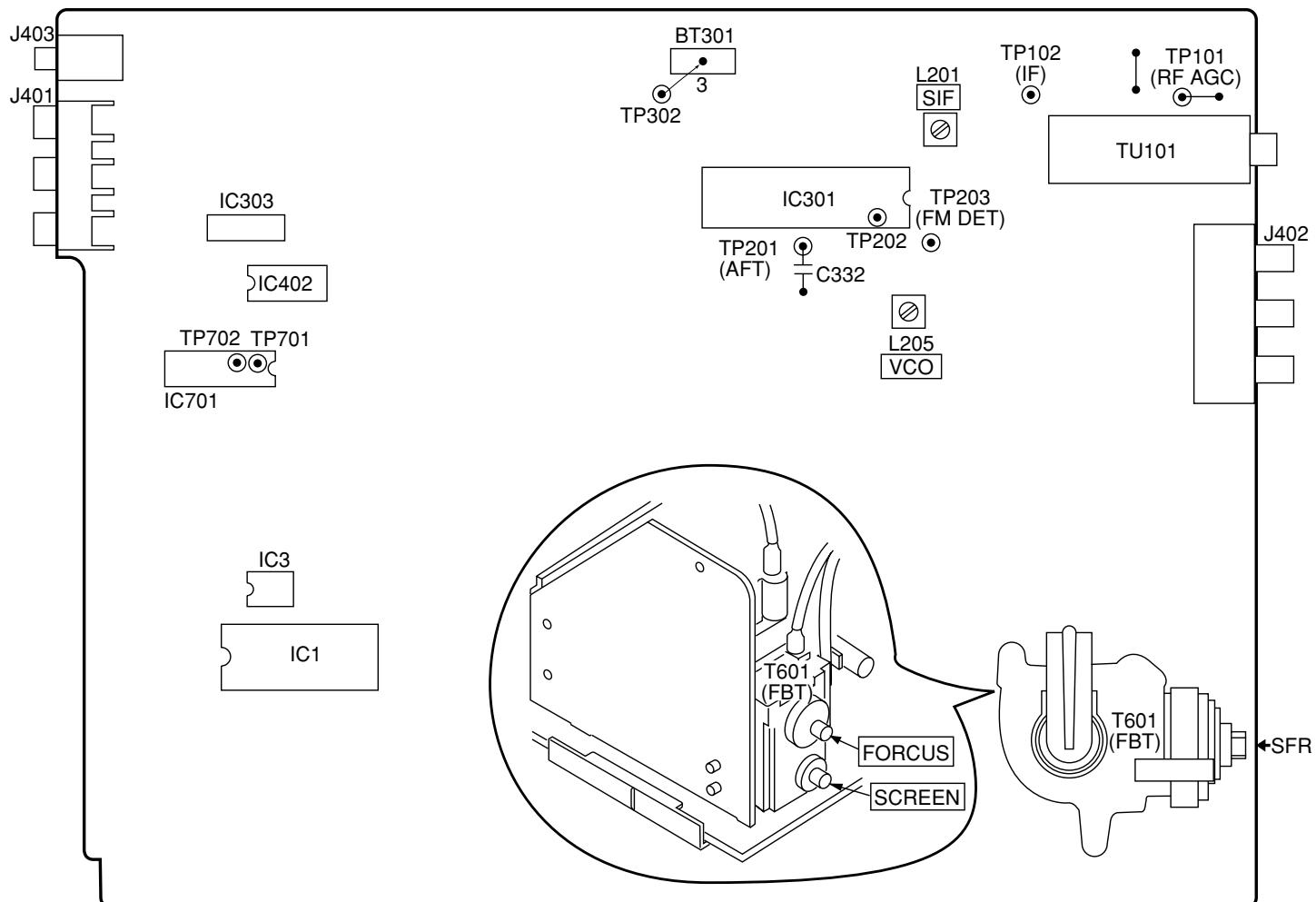


Position of wedge

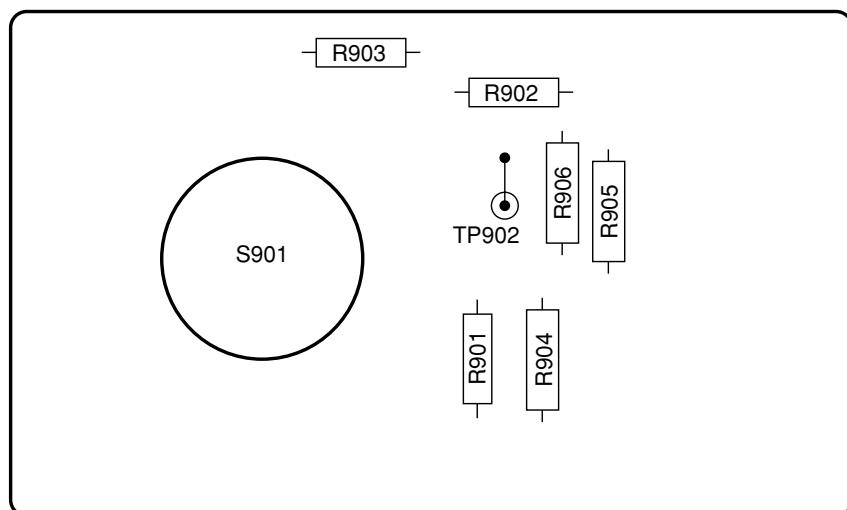
Fig. 1-9

ELECTRICAL ADJUSTMENT

A MAIN C. B (Top View)



B NK C. B (Top View)



1. Menu Screen Adjustment

- Operate after inputting the following initial figures when replacing EEPROM.
- Check the condition and adjust the area where the general repair is carried out.

TV-S2011	Initial Figures
PAGE 1	
1. H POS	20
2. V POS	2
3. V SIZE	18
4. OSD POS	6
5. PIF VCO	58
6. RF AGC	32
PAGE 2	
1. R CUT OFF	127
2. G CUT OFF	127
3. B CUT OFF	127
4. G DRIVE	127
5. B DRIVE	127
PAGE 3	
1. SUB CONTRAST	+24
2. SUB BRIGHT	+35
3. SUB TINT	0
4. SUB COLOR	+15
PAGE 4	SPECIFIED FIGURE
1. 3.58 TRAP	ON
2. BPF	AUTO
3. H AFC	+1
4. WPL	OFF
PAGE 5	
1. ATT	10
2. SPECTRAL	31
3. WIDEBAND	31

1-1. [H POS] Horizontal Positioning / Adjustment Menu Screen : PAGE 1-1

Input signal : Crosshatch

Measuring instrument : Pattern generator

- Use the volume keys on the jig remote controller to adjust the dot mark in the centre of crosshatch screen to the exact centering position by allocating an equal number of squares on the left and right sides of the dot. (Fig. 1-1)

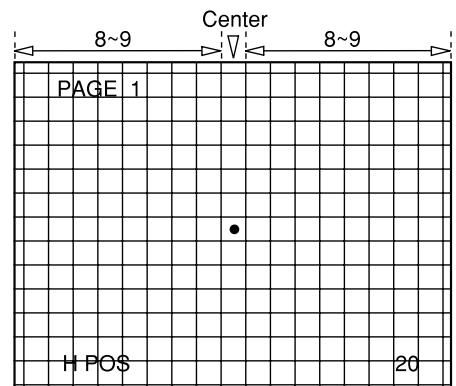


Fig. 1-1

1-2. [V POS] Vertical Positioning / Adjustment Menu Screen : PAGE 1-2

Input signal : Crosshatch

Measuring instrument : Pattern generator

- Using the volume keys on the jig remote controller, adjust the dot mark to the exact vertical centre position in the crosshatch screen. (Fig. 1-2)

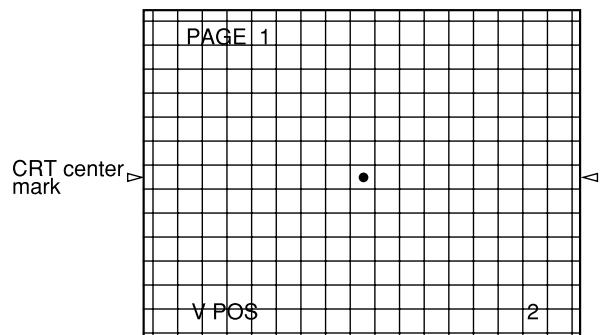


Fig. 1-2

1-3. [V SIZE] Vertical Size Adjustment / Adjustment Menu Screen : PAGE 1-3

Input signal : Crosshatch

Measuring instrument : Pattern generator

- Use the volume keys on the jig remote controller to adjust the vertical number of squares to 13 or 14. (Fig. 1-3)

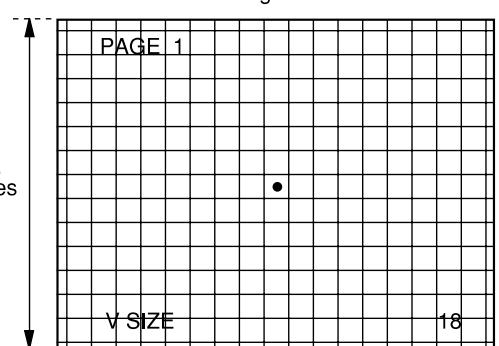


Fig. 1-3

1-4. [OSD POS] OSD Positioning / Adjustment Menu Screen : PAGE 1-4

Input signal : Not specified

- Adjust + mark positions on both left and right in the equal distance towards the screen edge. A = B (Fig. 1-4)

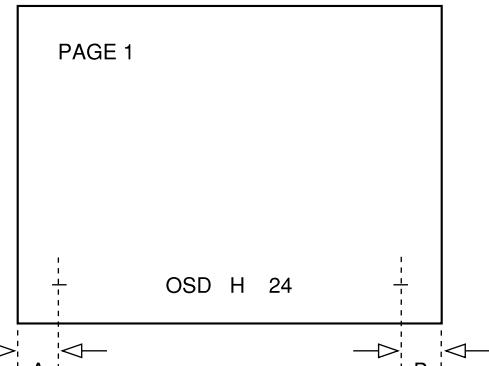


Fig. 1-4

1-5. [PIF VCO] Video IF/VCO Adjustment / Adjustment Menu Screen : PAGE 1-5

Input signal : ANT RF - INPUT

- Use the volume keys on the jig remote controller to adjust AFT until "OK" status is indicated on the screen. (Fig. 1-5)
- If there is more than one range to adjust, select the average figures.

* "NG" will be indicated for SD when no screen signal was sent. It will not be any problem for VCO adjustment. (eg. Video input environment with receiving no signal.) Even in this case, adjustment is possible if there is a load on.

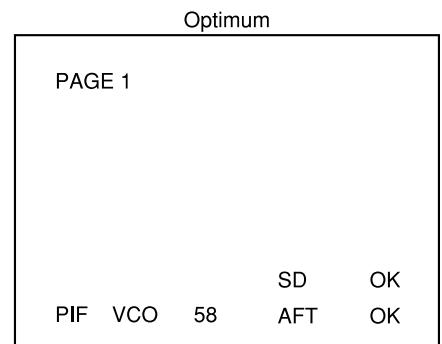


Fig. 1-5

1-6. [RF AGC] RF-AGC / Adjustment Menu Screen : PAGE 1-6

Input signal : ANT RF - INPUT

Test point : TP-101 [RF - AGC] (TU101-1 pin)

Measuring instrument : Oscilloscope

1. Connect oscilloscope to TP-101
2. Using the volume keys on the jig remote controller, adjust the test point voltage becomes to $3.5V \pm 0.3V$. And at the same time, confirm AFT status changes to "OK" as shown in the fig. 1-6.

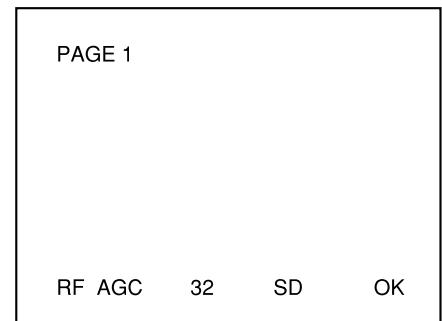


Fig. 1-6

2. White Balance Adjustment : Adjustment Menu Screen : PAGE 2-1~5.

* User's picture quality will be cleared when the adjustment menu screen appears.

Input signal : White raster

Contents of the adjustment :

- | |
|--------------|
| 1. R CUT OFF |
| 2. G CUT OFF |
| 3. B CUT OFF |
| 4. G DRIVE |

* More than 20 minutes of aging is required before adjustment.

- | |
|------------|
| 5. B DRIVE |
|------------|

* The whole process should be repeated for several times for the adjustment.

Measuring instrument : Pattern generator

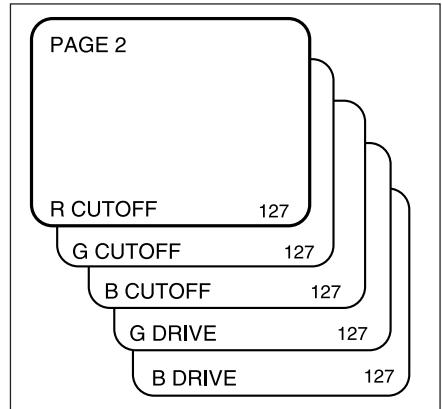


Fig. 2-1

Cut Off Adjustment :

2-1. Use the pattern generator to input the white raster signal.

2-2. Using the volume keys on the jig remote controller, fix the figure of the strongest color on the screen to the level 127 and adjust the other 2 cut off figures until a white picture appears on the screen. Fig. 2-1

Drive Adjustment :

- 2-3. Using the volume keys on the jig remote controller, bring the figure of **[4. G DRIVE]** up to more than 200 till the color becomes greenish.
- 2-4. Reduce the numeric figure to the point where the greenish color disappears completely.
- 2-5. Use the volume keys on the jig remote controller to increase the numeric figure of **[5. B DRIVE]** up to more than 200 till the color becomes bluish.
- 2-6. Reduce the numeric figure to the point where the bluish color disappears completely.
- 2-7. Repeat the process of 2-1 to 2-6 for several times and adjust for whiter look.

Focus Adjustment :

Input signal : Dot pattern
 Adjustment point : SFR located at upper part of FBT (T601)
 Measuring instrument : Pattern generator

- Adjust SFR which is located at upper part of FBT (T601) in order to get the best focus point for the dot.

3. Screen Adjustment :

Input signal : No signal (No raster)
 Adjustment point : SFR located at lower part of FBT (T601)
 Measuring instrument: Pattern generator / Leader : LCG-404

1. Enter to the “Adjustment Menu Screen” by using the jig remote controller.
2. Press “0” key of the 10 numeric channel keypad to get a horizontal single line screen. (Fig. 2-2)
3. Adjust SFR located at the lower part of FBT (T601) until the horizontal line starts to be slightly brightened.
4. Repeat the process of step 2 and return to the “Adjustment Menu Screen”.



Fig. 2-2

- 3-1. **[SUB BRIGHT]** Sub-brightness Adjustment / Adjustment Menu Screen : PAGE 3-2
(make sure of the order)

Input signal : Color bar (Stair step)
 Measuring instrument : Pattern generator

1. Using the volume keys on the jig remote controller, adjust the scale of the second last from right to be slightly brightened. (Fig. 3-1)

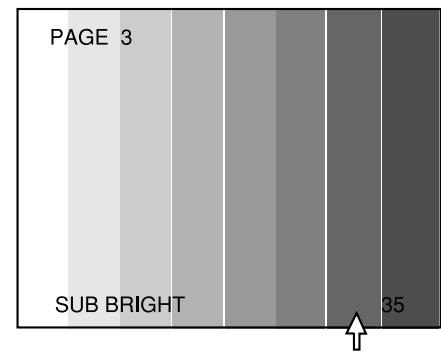


Fig. 3-1

- 3-2. **[SUB CONTRAST]** Sub-contrast Adjustment / Adjustment Menu Screen : PAGE 3-1

Input signal : Color bar (QIW), Chroma / Off
 Measuring instrument : Oscilloscope
 Pattern generator

- Test point : TP902/NK C.B.
1. Connect oscilloscope to TP902.
2. Using the volume keys on the jig remote controller, adjust the voltage between pedestal level and 100% white to $80V \pm 2.0V$ as shown in the Fig 3-2.

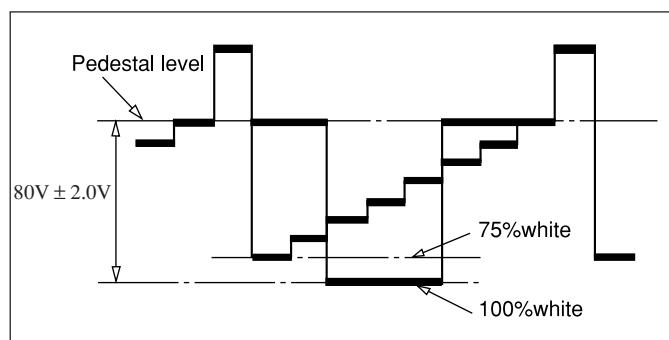


Fig. 3-2

- 3-3. **[SUB TINT]** Sub-tint Adjustment / Adjustment Menu Screen : PAGE 3-3

Input signal : Color bar
 VIDEO IN
 Measuring instrument : Oscilloscope
 Pattern generator

- Test Point : TP302/BT301 (wire connector) 3 pin
1. Connect oscilloscope to TP302.
2. Use the volume keys on the jig remote controller to align each bottom point of the waveform tangential to the linear ramp as shown in Fig 3-3.

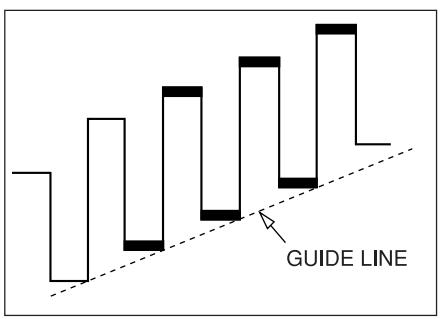


Fig. 3-3

3-4. **SUB COLOR** Sub-color Adjustment / Adjustment Menu Screen : PAGE 3-4

Input signal : Color bar

VIDEO IN

Measuring instrument : Oscilloscope

Pattern generator

Test point : TP302/BT301(wire connector) 3 pin

1. Connect oscilloscope to TP302
2. Use the volume keys of the jig remote controller and adjust the top and bottom excursions of waveform to be linear as shown in the Fig. 3-4.

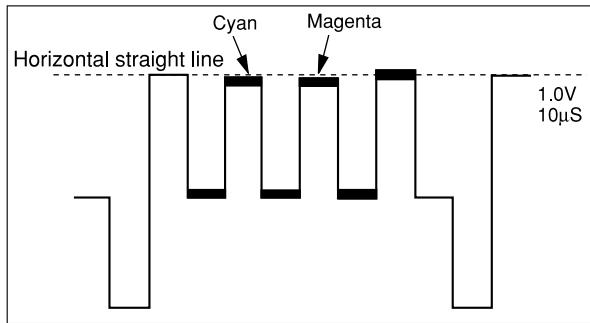


Fig. 3-4

4. **TV SETTING CHECK** Checking of Setting per Model Basis / Adjustment Menu Screen : PAGE 1~4

The setting details are fixed per model basis. Do not set other than specified.

- Check whether the adjustment menu screen is matching to the table-4. If not, use the volume keys on the jig remote controller to search and set the matching menu screen to the model.

3.58 TRAP	0 : ON
BPF	2 : AUTO
H AFC	1 : +1
WPL	0 : OFF

* The contents for 3.58 TRAP can not be modified.

Table-4

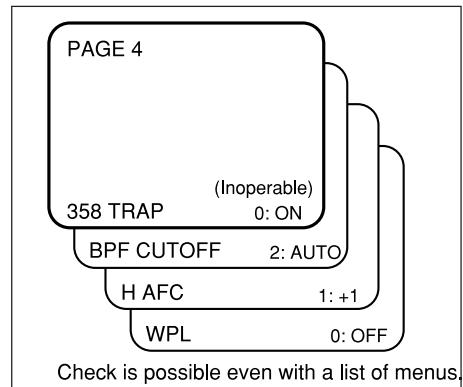


Fig. 4

5-1. **ATT ALIGNMENT** ATT Adjustment / Adjustment Menu Screen : PAGE 5-1

Input signal : ANT RF-Input

Measuring instrument : Oscilloscope

Test point : IC701 2 pin [TV-L]

1. Connect oscilloscope to TP702 (IC701 2 pin)
2. Use the volume keys on the jig remote controller and adjust the figure for IC701 2 pin to $490V \pm 20m Vrms$.

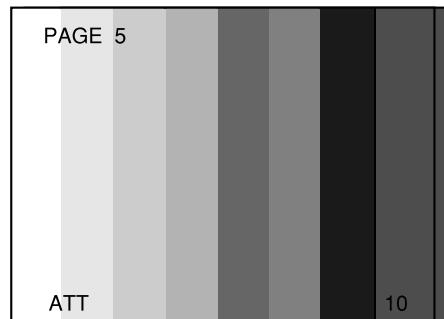


Fig. 5-1

5-2. **SEPARATION ALIGNMENT** Stereo Audio Segregating Adjustment / Adjustment Menu screen : PAGE 5-2 to 5-3

Input signal : Setting of TV audio multiple signal equipment

Modulation	Internal
Internal Modulation	400Hz
Audio	L ch
Channel	2 ch
Video Signal	Color Bar

- RF output for Audio multiple signal generator/2CH

Measuring instrument : Oscilloscope

TV audio multiple signal generator

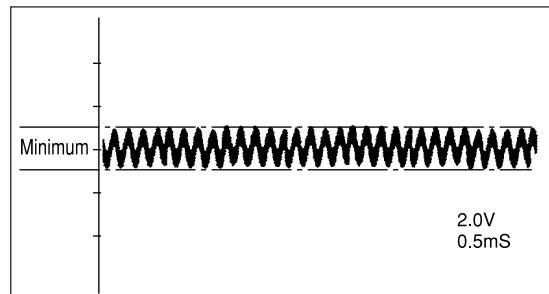


Fig. 5-2

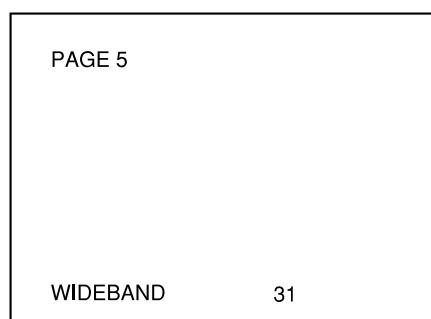


Fig. 5-3

Test Point : IC701 1 pin **TV-R**

1. Connect oscilloscope to TP701 (IC701 1 pin).

2. Receive TV channel 2.

3. PAGE 5-3

Use the volume keys on the jig remote controller to adjust IC701 1 pin to the minimum voltage waveform as shown in the Fig. 5-2 (Fig. 5-3)

4. PAGE 5-2

Set internal modulation of TV audio multiple signal generator to 1kHz. Proceed to adjust as explained in the previous paragraph 3. (Fig. 5-4)

5. Repeat the process of 3 to 4 and set them to the minimum levels.

PAGE 5

SPECTRAL

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Fig. 5-4

6. Tuner Adjustment :

Perform the following adjustment in case of replacing any adjustment element during the repair. Proceed with the following adjustments as well as in the adjustment menu screen. If those adjustments are not completed on both sides, the required adjustment will not be registered even though the adjustment has been processed in the adjustment menu screen.

The components which will be affected due to the repair.

- VCO Coil
- SIF Coil

6-1. **VCO ADJUSTMENT** VCO(PIF) adjustment / Video Carrier Frequency Free Running Adjustment

Input signal : RF-color bar (Generator)

Input level : 90dB μ V (Level may not be exactly the same depends on the receiving condition)

Broadcast CH/fc=45.75MHz

- Simple adjustment method receives normal broadcasting.

Mode : TUNER

Test point : INPUT/TP-102 **[IF]** (TU101-11 pin) or receiving condition

OUTPUT/TP-201 **[AFT]** (IC301-44 pin)

Adjustment point : L205/**[P-IF]**

Measuring instrument : Oscilloscope
Pattern generator

1. Connect oscilloscope to TP-201.

2. Input specified level of RF signal to TP-102 and adjust L205 until TP-201 voltage becomes $2.8V \pm 0.2VDC$.

6-2. **SIF ADJUSTMENT** Stereo IF Modulation Adjustment

Input signal : AM/FM-SG RF OUT/4.5MHz - SIF

MOD OFF

90dB μ V

- Simple adjustment method receives normal broadcasting.

Mode : TUNER

Test point : INPUT/TP-202 : IC301-52 pin

OUTPUT/TP-203 : IC301-54 pin

Adjustment point : L201/**[S-IF]**

Measuring instrument : Oscilloscope
AM/FM-Signal generator

1. Connect oscilloscope to TP-203.

2. Input specified signal to TP-202 (or receiving condition) and adjust L201 until TP-203 voltage becomes $4.5V \pm 0.2VDC$. (Fig. 6-1)

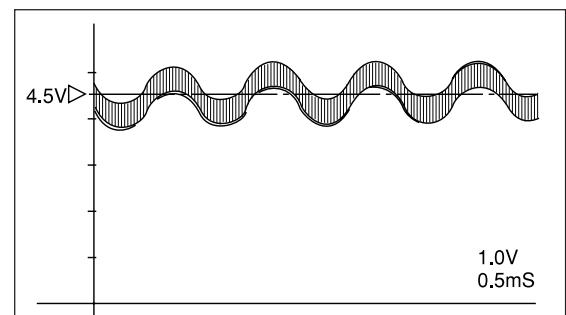


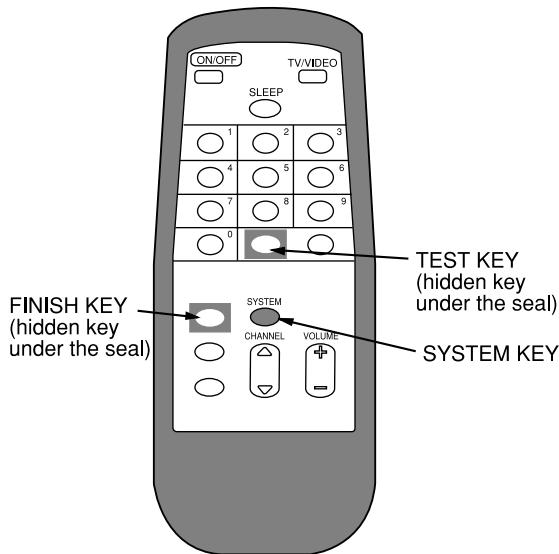
Fig. 6-1

Setting of IIC BUS Data

This model is designed to adjust most parts of the image projection and deflection system by using the jig remote controller.

Preparations :

- Modify the hidden keys on the RC-6VT06 jig remote controller (TV-C142/86-LB4-951-010) so that they can easily be pressed.
2 keys to be modified. (Refer to the below illustration)



Aging Mode Operation Method :

Make sure that confirmation after replacing EEPROM.

1. Press the “TEST” key on the jig remote controller and enter to the aging mode.
(Refer to Fig. 1)
2. Press the “SYSTEM” key to check the status of distinction switch
 - If the contents are different, choose [NH2] by pressing the “2” key for the destinations.
 - For the data, move 1 - 16 by using channel keys and change to “0” or “1”.
 - Select “TV-S2011/[NH2] and leave the data as being displayed.
(Fig. 2).

AGING AFT OK 000H NH2

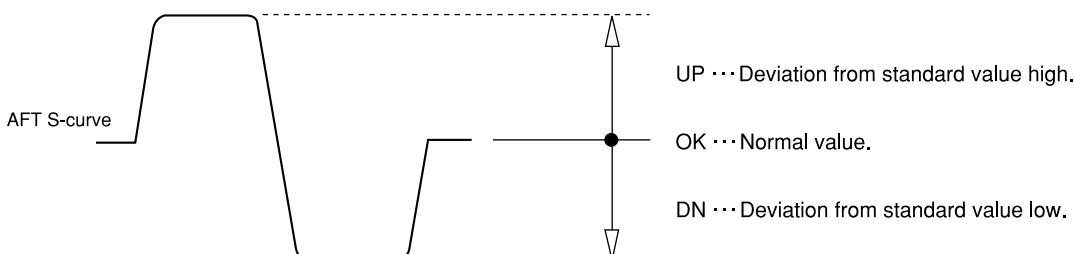
Fig. 1

1 NH1	
2 NH2	← RED COLOR
3 NH3	
4 NH4	
5 AR	
	RED COLOR
1 2 3 4 5 6 7 8 9 10 11 12	↓
1 1 0 0 0 1 0 1 1 1 1 1 1 1 0 0 0	

Fig. 2

Contents of Aging Mode :

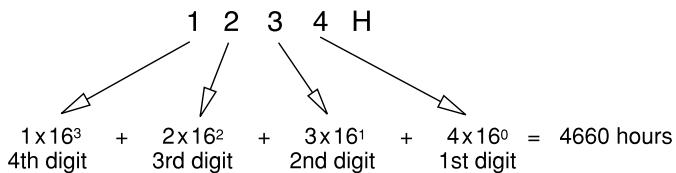
1. Release “Auto Power Off” function
Release “Auto Power Off” function when no input is supplied.
Use this mode for warming up (aging) during CRT adjustment.
2. AFT S-curve status indication
The condition of AFT S-curves are indicated by “OK” for suitable tuning, “UP” for too high or “DN” for too low.



3. Display of "CRT ON" accumulated hours

The CRT usage time is accumulated on an hourly basis and is displayed in hexadecimal figures.

Sample calculation of displayed hexadecimal figures : AFT OK 1234 H NH2



- The display will be reset to 0000H when the accumulated hours exceed 7FFFH(32768 hours).

Adjustment Mode Operation Method :

- Return to the aging display by pressing the "SYSTEM" key and press "TEST" key once again to enter into the adjustment menu screen.

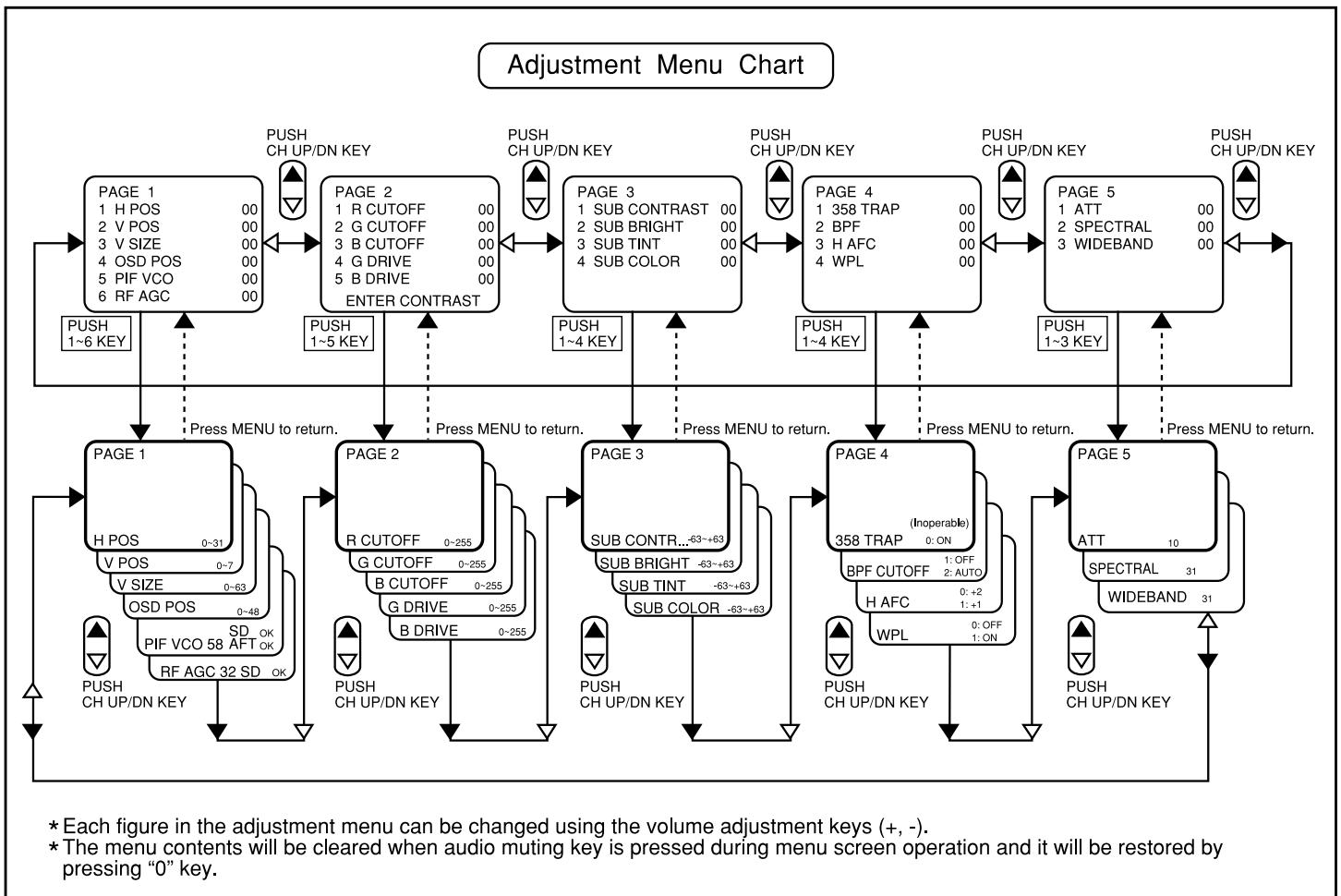


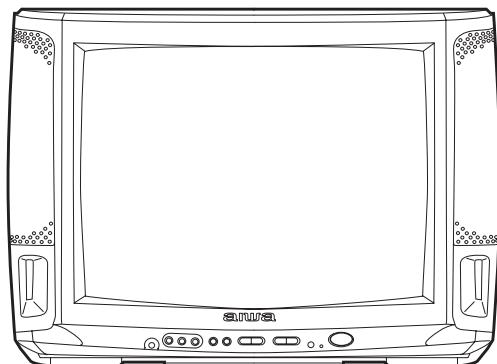
Fig. 3



アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO., LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111



TV-S2011 U



SERVICE MANUAL

COLOR TELEVISION

- The Correction Service Manual is issued because of some errors in Service Manual of Model Name TV-S2011 (U),
(S/M Code No. 09-99C-416-8R2).

aiwa
S/M Code No. 09-003-416-8C1

CORRECTION
DATA

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C210	87-018-115-080	CAP, CER 47P-50V	
8Z-JBH-621-010	IC,M37272M8-142SP			C211	87-018-115-080	CAP, CER 47P-50V	
87-A91-538-010	RCR UNIT,SBX1981-72P			C214	87-016-632-080	CAP,E 0.47-50 SSL	
87-A21-433-010	IC,KS24C041I			C215	87-016-632-080	CAP,E 0.47-50 SSL	
87-A20-611-080	IC,M51943BSL-700A			C301	87-016-624-080	CAP,E 10-16 SSL	
87-A21-239-010	IC,TA1201CN			C302	87-016-624-080	CAP,E 10-16 SSL	
87-A20-364-010	IC,KIA7809PI			▲ C303	87-016-624-080	CAP,E 10-16 SSL	
87-002-421-010	IC,NJM2233BL			▲ C304	87-016-637-080	CAP,E 10-50 SSL	
87-A21-090-010	IC,LA4600			C305	87-018-134-080	CAPACITOR,TC-U 0.01-16	
87-027-666-010	IC,TC4052BP			C306	87-A10-112-080	CAP,E 100-10 SSL	
87-070-237-010	IC,LA7832			C307	87-A10-299-080	CAP,M 0.022-50 J	
8Z-JBH-605-010	IC,CXA2104S			C308	87-016-632-080	CAP,E 0.47-50 SSL	
▲ 87-A21-290-010	IC,STR30110			C309	87-018-147-080	CAP,TC-U 10P-50 CH	
				C310	87-018-119-080	CAP, CER 100P-50V	
				C311	87-018-209-080	CAP, CER 0.1-50V	
TRANSISTOR				C312	87-018-209-080	CAP, CER 0.1-50V	
87-026-269-080	TR,DTA114ES			C313	87-018-209-080	CAP, CER 0.1-50V	
89-327-854-080	TR,2SC2785F			C314	87-018-134-080	CAPACITOR,TC-U 0.01-16	
89-111-755-080	TR,2SA1175F			C315	87-018-131-080	CAP, CER 1000P-50V	
89-110-154-080	TR,2SA1015Y			C316	87-A10-378-080	CAP,E 2.2-50 K SH	
87-026-245-080	TR,DTC114ES			C317	87-016-634-080	CAP,E 2.2-50 SSL	
87-A30-050-010	TR,2SD2499			C318	87-018-134-080	CAPACITOR,TC-U 0.01-16	
87-A30-176-010	TR,2SC1573A P/Q/R			C319	87-016-575-080	CAP,E 220-16 SSL	
89-320-012-080	TR,2SC2001L			C320	87-018-196-080	CAP, CER 1500P-16V	
				C321	87-016-636-080	CAP,E 4.7-50 SSL	
DIODE				C323	87-016-625-080	CAP,E 22-16 SSL	
87-017-931-080	ZENER,MTZJ5.6B			C324	87-016-632-080	CAP,E 0.47-50 SSL	
87-002-743-080	ZENER,MTZJ 33B			C325	87-016-632-080	CAP,E 0.47-50 SSL	
87-070-136-080	ZENER,MTZJ5.1B			C328	87-016-624-080	CAP,E 10-16 SSL	
87-A40-523-080	ZENER,MTZJ9.1B			C330	87-016-633-080	CAP,E 1-50 SSL	
87-A40-348-080	ZENER,MTZJ3.3A			C332	87-018-134-080	CAPACITOR,TC-U 0.01-16	
87-A40-611-080	ZENER,MTZJ3.9B			C334	87-018-134-080	CAPACITOR,TC-U 0.01-16	
87-020-465-080	DIODE,ISS133 (110MA)			C335	87-016-574-080	CAP,E 100-16 SSL	
▲ 87-A40-520-080	ZENER,MTZJ11B			C336	87-018-209-080	CAP, CER 0.1-50V	
▲ 87-A40-286-080	DIODE,RGP10JE-5025			C338	87-016-632-080	CAP,E 0.47-50 SSL	
87-070-274-080	DIODE,IN4003 SEM			C342	87-016-633-080	CAP,E 1-50 SSL	
87-017-354-080	DIODE,RU3			C343	87-018-131-080	CAP, CER 1000P-50V	
87-A40-328-010	DIODE,GBU4JL			C401	87-016-577-080	CAP,E 470-16 SSL	
				C402	87-016-577-080	CAP,E 470-16 SSL	
				C403	87-016-577-080	CAP,E 470-16 SSL	
MAIN C.B				C404	87-016-574-080	CAP,E 100-16 SSL	
BT301	87-JBC-625-010		CONN ASSY,5P V WHT TV-NK	C405	87-016-636-080	CAP,E 4.7-50 SSL	
BT601	87-JBC-626-010		CONN ASSY,4P V WHT TV-NK	C406	87-016-630-080	CAP,E 0.22-50 SSL	
C1	87-016-624-080		CAP,E 10-16 SSL	C407	87-016-630-080	CAP,E 0.22-50 SSL	
C2	87-018-134-080		CAPACITOR,TC-U 0.01-16	C410	87-016-624-080	CAP,E 10-16 SSL	
C3	87-018-134-080		CAPACITOR,TC-U 0.01-16	C411	87-016-624-080	CAP,E 10-16 SSL	
C4	87-018-196-080		CAP, CER 1500P-16V	C412	87-016-624-080	CAP,E 10-16 SSL	
C5	87-016-633-080		CAP,E 1-50 SSL	C413	87-016-624-080	CAP,E 10-16 SSL	
C7	87-016-621-080		CAP,E 220-10 SSL	C414	87-016-624-080	CAP,E 10-16 SSL	
C15	87-018-123-080		CAP, CER 220P-50V	C501	88-708-980-810	CAP,M 0.056-100 J AMZV	
C16	87-016-633-080		CAP,E 1-50 SSL	C502	87-A10-831-080	CAP,E 1000-25 M SMG	
C17	87-018-131-080		CAP, CER 1000P-50V	C503	87-016-633-080	CAP,E 1-50 SSL	
C18	87-018-128-080		CAP, CERA-SOL SS 560P	C504	87-016-633-080	CAP,E 1-50 SSL	
C19	87-016-629-080		CAP,E 0.1-50 SSL	C508	87-A10-469-080	CAP,CER 2200P-500 K B DD10	
C23	87-018-123-080		CAP, CER 220P-50V	C510	87-018-131-080	CAP, CER 1000P-50V	
C24	87-018-131-080		CAP, CER 1000P-50V	C511	87-016-591-080	CAP,E 100-35 SSL	
C101	87-016-636-080		CAP,E 4.7-50 SSL	C512	87-018-127-080	CAP, CER 470P-50V	
C104	87-016-621-080		CAP,E 220-10 SSL	C601	87-016-599-080	CAP,E 10-250 SSL	
C106	87-A10-576-080		CAP,CER 0.01-50 Z YF	C603	87-010-974-080	CAP,CER 220P-500 B	
C201	87-018-134-080		CAPACITOR,TC-U 0.01-16	C604	87-010-396-080	CAP,E 470-35 SME	
C202	87-018-134-080		CAPACITOR,TC-U 0.01-16	C605	87-016-587-080	CAP,E 1000-25 SSL	
C203	87-016-632-080		CAP,E 0.47-50 SSL	C606	87-ZJBH-626-010	CAP,M/P 0.30-250 J A TYPE	
C204	87-018-134-080		CAPACITOR,TC-U 0.01-16	C607	87-A11-321-090	CAP,E 100-160 M 105 YXA	
C205	87-016-577-080		CAP,E 470-16 SSL	C608	87-ZJB-602-010	CAP,CER 220P-2K K BN	
C206	87-A10-287-080		CAP,M 2200P-50 J	▲ C609	87-016-482-010	CAP,PP 6800P-1.6K J DKR	
C207	87-016-632-080		CAP,E 0.47-50 SSL	C610	87-010-974-080	CAP,CER 220P-500 B	
C208	87-018-134-080		CAPACITOR,TC-U 0.01-16	C611	87-010-974-080	CAP,CER 220P-500 B	
C209	87-016-627-080		CAP,E 47-16 SSL	C612	87-016-624-080	CAP,E 10-16 SSL	
				C613	87-016-634-080	CAP,E 2.2-50 SSL	
				C615	87-016-215-080	CAP,E 1-160 M TWSS	

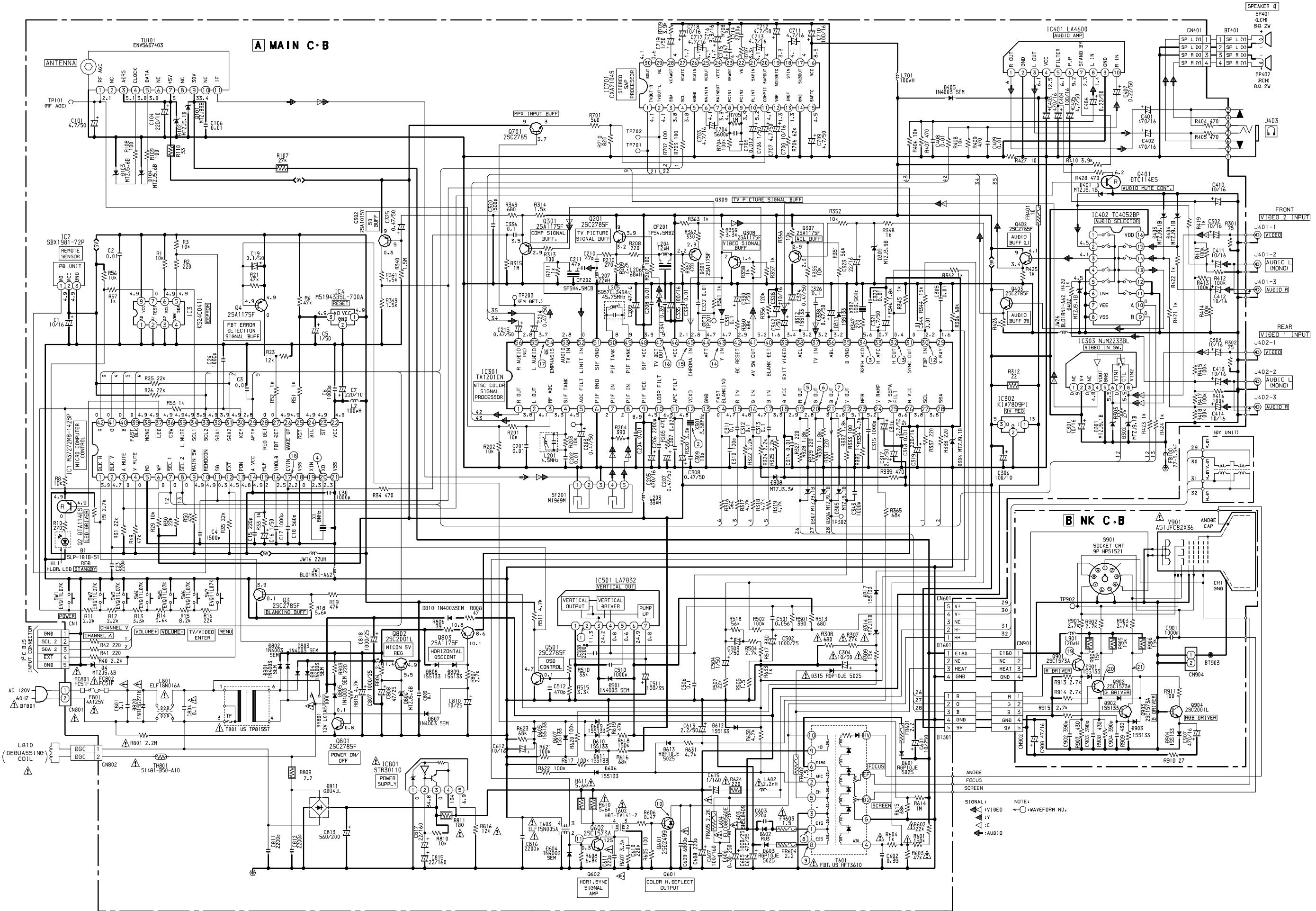
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C703	87-015-464-080		CAP,E 4.7-16 BP	△ L602	87-A50-040-010		COIL,2.2MH
C704	87-A10-292-080		CAP,M 5600P-50 J	△ L603	8Z-JBE-606-010		COIL,LINEARITYSH5L8409
C705	87-A10-296-080		CAP,M 0.012-50 J	△ L604	8Z-JBE-608-010		COIL,CHOKEELC08D560E
C706	87-016-633-080		CAP,E 1-50 SSL	△ L701	87-005-614-080		COIL 100UH LAV35 J
C707	87-016-636-080		CAP,E 4.7-50 SSL	△ L801	8Z-JBH-613-010		FLTR,LINE ELF15N013A
C708	87-016-624-080		CAP,E 10-16 SSL	R107	87-A00-331-090		RES,M/F 27K-2W J RSF(S)
C709	87-016-636-080		CAP,E 4.7-50 SSL	R110	87-A00-160-090		RES,M/F 33-2W J RSF(S)
C710	87-016-574-080		CAP,E 100-16 SSL	△ R307	87-025-427-080		RES,M/F 27K-1/6W F
C711	87-015-464-080		CAP,E 4.7-16 BP	△ R308	88-121-681-080		RES,680-1/8W J
C712	87-016-636-080		CAP,E 4.7-50 SSL	△ R309	87-025-380-080		RES,M/F 15K-1/6W F
C713	87-015-464-080		CAP,E 4.7-16 BP	R312	87-A00-356-090		RES,M/F 22-2W J RSS2X
C714	87-A10-288-080		CAP,M 2700P-50 J	△ R601	88-130-154-080		RES,150K-1/4W J
C716	87-016-301-080		CAP,TN 3.3-16K DN	△ R602	88-121-223-080		RES,22K-1/8W J
C717	87-015-464-080		CAP,E 4.7-16 BP	△ R603	88-121-473-080		RES,47K-1/8W J
C718	87-016-302-080		CAP,TN 10-16K DN	△ R604	88-130-102-080		RES,1K-1/4W J
△ C719	87-016-633-080		CAP,E 1-50 SSL	R606	8Z-JBH-628-080		RES,M/F 0.47-1/2W K ERX 12SJ
△ C801	87-A10-374-010		CAP,M/P 0.1-275 K RMR	△ R607	88-140-332-080		RES,3.3K-1/2W J
△ C804	87-A10-374-010		CAP,M/P 0.1-275 K RMR	△ R610	87-A00-548-090		RES,M/F 5.6K-2W J ERGS
C807	87-016-587-080		CAP,E 1000-25 SSL	△ R611	87-A00-548-090		RES,M/F 5.6K-2W J ERGS
C808	87-016-582-080		CAP,E 47-25 SSL	△ R624	87-A00-544-090		RES,M/F 220-3W J ERGS
C809	87-018-209-080		CAP, CER 0.1-50V	R706	87-A00-130-080		RES,M/F 62K-1/6W F
C810	87-016-628-080		CAP,E 10-25 SSL	△ R801	8Z-JBH-629-080		RES,SD 2.2M-1/2W K ERC 12UG
C811	87-A10-867-090		CAP,CER 2200P-2K K R	R809	87-A00-277-090		RES,CEM 2.2-10W J RGC
C812	87-A10-867-090		CAP,CER 2200P-2K K R	△ R811	8Z-JBE-603-090		RES,CEM 180-20W K ZY
C813	8Z-JBE-604-090		CAP,E 560U-200 K	△ R816	87-025-425-080		RES,M/F 12K-1/6W F
△ C815	87-A11-319-080		CAP,E 22-160 M 105 YXA	△ RY801	87-A90-358-010		RELAY,12V LK1AF
C816	87-012-388-010		CAP,CER 2200P-125 UL	SF201	8Z-JBH-633-010		FLTR,SAW M1969-US
C817	87-A11-319-080		CAP,E 22-160 M 105 YXA	SW1	87-A90-712-080		SW,TACT EVQ11L07K
C818	87-016-587-080		CAP,E 1000-25 SSL	SW2	87-A90-712-080		SW,TACT EVQ11L07K
CF201	84-LB3-626-010		FLTR,TPS4.5MB2	SW3	87-A90-712-080		SW,TACT EVQ11L07K
CF202	87-008-574-080		FLTR,SFSH4.5MCB	SW4	87-A90-712-080		SW,TACT EVQ11L07K
CN1	87-009-195-010		CONN,5P B5BEH	SW5	87-A90-712-080		SW,TACT EVQ11L07K
CN401	87-049-469-010		CONN,4P V	SW6	87-A90-712-080		SW,TACT EVQ11L07K
CN601	87-A60-933-010		CONN,4P V B04(5-3)B-DVS-L	SW7	87-A90-712-080		SW,TACT EVQ11L07K
△ CN801	87-099-674-010		CONN,2P VA V	△ T601	8Z-JBE-602-010		FBT,US HFT3610
CN802	82-481-649-010		PLUG,2P V TV-50P	△ T602	85-JT2-653-010		PT,HDT-TV141-2
D1	87-070-110-010		LED,SLP-181B-51	△ T603	8Z-JBH-612-010		FLTR,PULSE ELF15N005A
△ D820	8Z-JBH-606-010		VRIS,TNR15G271K	△ T801	8Z-JBH-614-010		PT,US TP8155T
△ F801	87-035-489-010		FUSE,4A125V D UL	TH801	87-A90-996-010		POS-THMS,S1481-B50-A10
△ FC801	87-A90-160-080		FUSE CLAMP,FC 51F	TU101	8Z-JBE-610-010		TU UNIT,USA ENV56D74G3
△ FC802	87-A90-160-080		FUSE CLAMP,FC 51F	X1	87-030-212-080		CERA LOCK CST8.0M
FR401	87-029-151-090		RES,FUSE 10-2W J	X301	87-A70-007-080		VIB,XTAL 3.58MHZ AQC-1001
FR601	87-A00-063-060		RES,FUSE 2.2-1/2W J R-TYPE	X302	87-030-327-010		VIB,CER CSB503F30
△ FR602	87-A00-056-060		RES,FUSE 1.5-2WJ R-TYPE	NK C.B			
△ FR603	87-A00-056-060		RES,FUSE 1.5-2WJ R-TYPE	C901	87-A10-833-090		CAP,CER 1000P-2K K R
FR604	87-A00-050-060		RES,FUSE 2.2-1W J R-TYPE	C902	87-018-126-080		CAP,TC-U 390P-50 B
△ FR605	87-029-175-060		RES FUSE,2.2K 1/2W J	C903	87-018-126-080		CAP,TC-U 390P-50 B
J401	87-A60-322-110		JACK,PIN 3P Y-W-R W/SW	C904	87-018-126-080		CAP,TC-U 390P-50 B
J402	8Z-JBH-616-010		JACK,PIN 3P Y	C907	87-016-577-080		CAP,E 470-16 SSL
J403	87-A60-420-010		JACK,3.5 ST (MSC)	C908	87-016-627-080		CAP,E 47-16 SSL
JW1	8Z-JBH-635-080		COIL,CORE BL01RN1-A62	CN901	87-049-469-010		CONN,4P V
JW16	87-003-147-080		COIL,22UH J LAL02	CN902	87-009-033-010		CONNECTOR, 5P
JW26	8Z-JBH-635-080		COIL,CORE BL01RN1-A62	CN904	87-A60-485-010		CONN,2P V LV GRA
L2	87-005-614-080		COIL 100UH LAV35 J	L901	87-005-615-080		COIL,120UH J LAV35
L201	8Z-JBR-612-010		COIL,SIF 4.5MHZ 504BN	R904	87-A00-165-090		RES,M/F 15K-2W J RSF(S)
L203	87-003-148-080		COIL BIAS 33UH	R905	87-A00-165-090		RES,M/F 15K-2W J RSF(S)
L204	87-003-282-080		COIL,12UH	R906	87-A00-165-090		RES,M/F 15K-2W J RSF(S)
L205	8Z-JBH-610-010		COIL,PIF-SQ57EL349A 45.75MHZ	S901	86-LBR-670-010		SOCKET,CRT 9P HPS1521
L206	87-005-612-080		COIL,68UH J LAV35				
L207	87-003-147-080		COIL, 22UH				

⚠ Safety Components Symbol

This symbol is given to important parts which serve to maintain the safety of the product, and which are made to confirm to special Safety Specifications.

Therefore, when replacing a component with this symbol make absolutely sure that you use a designated part.

SCHEMATIC - 1 (MAIN / NK)



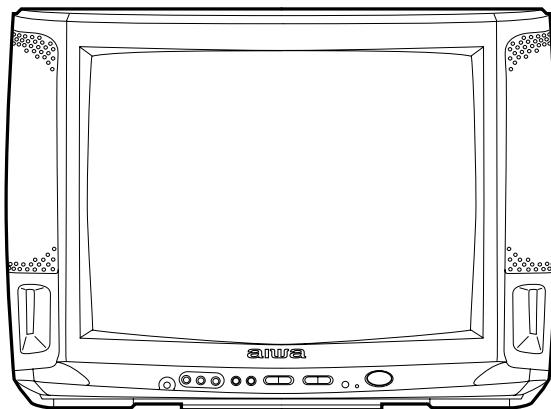


アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO., LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111



TV-S2011

UA



SERVICE MANUAL

COLOR TELEVISION

- The Correction Service Manual is issued because of some errors in Service Manual of MODEL NAME TV-S2011 (UA),
(S/M Code No. 09-99B-416-6R1).

aiwa
S/M Code No. 09-003-416-6C1

CORRECTION
DATA

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C29	87-018-123-080	CAP,CER 220P-50V	
	8Z-JB1-621-010	IC,M37272M8-164SP		C101	87-016-636-080	CAP,E 4.7-50 SSL	
	87-A90-297-010	RCR UNIT,SBX1981-52		C102	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-A21-392-010	IC,S-93C66ADP-1A		C103	87-016-575-080	CAP,E 220-16 SSL	
	87-A20-611-080	IC,M51943BSL-700A		C105	87-016-637-080	CAP,E 10-50 SSL	
	87-A20-362-010	IC,LA7676D		C106	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-A20-364-010	IC,KIA7809PI		C107	87-A10-207-080	CAP,TCS 0.01-50 KB UP050	
	87-A20-734-010	IC,TDA2007A		C151	87-016-583-080	CAP,E 100-25 SSL	
	87-002-577-010	IC,LA7953		C152	87-016-632-080	CAP,E 0.47-50 SSL	
	87-001-647-080	IC,NJM78L12A		C153	87-018-131-080	CAP,CER 1000P-50V	
	87-002-524-010	IC,LA7837		C203	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-017-956-010	IC,BA7611AN		C204	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-A20-980-010	IC,STR-S6707N		C205	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-020-881-080	IC,NJM78L05A		C207	87-016-632-080	CAP,E 0.47-50 SSL	
	87-A20-652-010	IC,SBX1837-01		C208	87-018-131-080	CAP,CER 1000P-50V	
TRANSISTOR				C210	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-A30-091-080	FET,2SJ460		C211	87-A10-585-080	CAP,CER 18P-50 J CH	
	89-111-755-080	TR,2SA1175F		C214	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	89-327-854-080	TR,2SC2785F		C215	87-016-637-080	CAP,E 10-50 SSL	
	89-337-794-580	TR,2SC3779D/E		C216	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-A30-090-080	FET,2SK2541		C218	87-016-583-080	CAP,E 100-25 SSL	
	89-334-674-580	TR,2SC3467D/E		C219	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-A30-041-110	TR,SE115N		C221	87-016-634-080	CAP,E 2.2-50 SSL	
	87-A30-005-010	TR,2SC2688M/L		C301	87-016-583-080	CAP,E 100-25 SSL	
	87-A30-050-010	TR,2SD2499		C302	87-016-632-080	CAP,E 0.47-50 SSL	
DIODE				C303	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-070-345-080	DIODE,IN4148		C305	87-016-583-080	CAP,E 100-25 SSL	
	87-070-150-080	ZENER,MTZJ33D		C306	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	87-070-274-080	DIODE,1N4003 SEM		C309	87-016-634-080	CAP,E 2.2-50 SSL	
	87-A40-286-080	DIODE,RGP10JE-5025		C312	87-016-637-080	CAP,E 10-50 SSL	
	87-A40-690-080	ZENER,MTZJ11B		C314	87-018-125-080	CAP,CER 330P-50V	
▲				C315	87-016-632-080	CAP,E 0.47-50 SSL	
	87-A40-004-080	ZENER,MTZJ16A		C316	87-016-633-080	CAP,E 1-50 SSL	
	87-A40-286-050	DIODE,RGP10JE-5025		C319	87-018-130-080	CAP,TC-U 820P-50 B	
	87-A40-450-090	DIODE,RU1P		C320	87-016-627-080	CAP,E 47-16 SSL	
	87-A40-354-090	DIODE,UF3GL-6251		C321	87-016-634-080	CAP,E 2.2-50 SSL	
	87-A40-440-080	ZENER,MTZJ7.5A		C322	87-016-633-080	CAP,E 1-50 SSL	
	87-017-654-060	DIODE,GBU6JL6131		C323	87-016-636-080	CAP,E 4.7-50 SSL	
MAIN C.B				C325	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	BT301	87-JBC-625-010	CONN ASSY,5P V WHT TV-NK	C326	87-018-113-080	CAP,CER 33P-50V	
	BT401	84-LB2-632-110	CONN ASSY,4P-SP-2	C327	87-016-633-080	CAP,E 1-50 SSL	
	BT403	87-JBC-624-010	CONN ASSY,9P V JK	C328	87-018-115-080	CAP,CER 47P-50V	
	C1	87-016-624-080	CAP,E 10-16 SSL	C329	87-016-637-080	CAP,E 10-50 SSL	
	C2	87-018-119-080	CAP,CER 100P-50V	C330	87-018-194-080	CAP,TC-U 91P-50 B	
	C3	87-018-134-080	CAPACITOR,TC-U 0.01-16	C332	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	C4	87-016-633-080	CAP,E 1-50 SSL	C333	87-018-118-080	CAP,TC-U 82P-50 B	
	C5	87-016-583-080	CAP,E 100-25 SSL	C334	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	C6	87-018-134-080	CAPACITOR,TC-U 0.01-16	C336	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	C9	87-018-128-080	CAP,CERA-SOL SS 560P	C337	87-018-134-080	CAPACITOR,TC-U 0.01-16	
	C10	87-018-131-080	CAP,CER 1000P-50V	C401	87-016-586-080	CAP,E 470-25 SSL	
	C11	87-016-633-080	CAP,E 1-50 SSL	C403	87-016-586-080	CAP,E 470-25 SSL	
	C12	87-018-209-080	CAP,CER 0.1-50V	C405	87-A10-776-080	CAP,E 1000-25 M 105 KMG	
	C13	87-018-109-080	CAP,CER 22P-50V	C406	87-016-621-080	CAP,E 220-10 SSL	
	C14	87-018-109-080	CAP,CER 22P-50V	C407	87-016-621-080	CAP,E 220-10 SSL	
	C15	87-018-109-080	CAP,CER 22P-50V	C408	87-016-627-080	CAP,E 47-16 SSL	
	C16	87-018-109-080	CAP,CER 22P-50V	C412	87-016-633-080	CAP,E 1-50 SSL	
	C17	87-018-109-080	CAP,CER 22P-50V	C414	87-016-637-080	CAP,E 10-50 SSL	
	C18	87-018-109-080	CAP,CER 22P-50V	C418	87-016-583-080	CAP,E 100-25 SSL	
	C19	87-018-131-080	CAP,CER 1000P-50V	C422	87-016-636-080	CAP,E 4.7-50 SSL	
	C21	87-016-637-080	CAP,E 10-50 SSL	C423	87-A10-831-080	CAP,E 1000-25 M SMG	
	C22	87-016-633-080	CAP,E 1-50 SSL	C424	87-016-632-080	CAP,E 0.47-50 SSL	
	C23	87-016-637-080	CAP,E 10-50 SSL	C425	87-016-632-080	CAP,E 0.47-50 SSL	
	C25	87-016-633-080	CAP,E 1-50 SSL	C426	87-016-637-080	CAP,E 10-50 SSL	
	C26	87-018-209-080	CAP,CER 0.1-50V	C427	87-016-586-080	CAP,E 470-25 SSL	
	C501	87-016-583-080	CAP,E 100-25 SSL	C504	87-016-591-080	CAP,E 100-35 SSL	
	C505	87-016-149-080	CAP,E 100-50 M 105 KME	C506	87-A10-367-080	CAP,CER 10P-500 J SL	
	C507	87-A10-402-080	CAP,M 0.22-100 J TF TYPE1	C508	87-016-633-080	CAP,E 1-50 M SSL	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C509	87-016-135-010		CAP, E 1000-25 M 105 KME	L202	87-003-140-080		COIL, 0.82UH K LAL02
C511	87-018-123-080		CAP,CER 220P-50V	L203	84-LB2-681-010		COIL,VCO 45.75MHZ SA
△ C601	87-016-596-080		CAP, E 10-160 SSL	L204	87-005-604-080		COIL,15UH J LAV35
C602	87-016-635-080		CAP, E 3.3-50 SSL	L205	87-003-146-080		COIL,15UH LAL02
C603	87-A10-457-080		CAP, E 2.2-160 M SSL	L206	84-LB2-682-010		COIL,AFT 45.75MHZ SA
C604	87-016-648-090		CAP, E 100-160 M SSL	L207	84-LB2-683-010		COIL,SIF 4.5MHZ SA
C606	87-A10-625-090		CAP,M/P 8200P-1.25K J	L208	87-005-485-080		COIL,100UH J FLR50
△ C607	87-010-974-080		CAP,CER 220P-500 B	L301	87-003-051-080		COIL,47UH
C609	87-016-583-080		CAP, E 100-25 SSL	L303	87-003-149-080		COIL,47UH
C610	87-016-594-090		CAP, E 1000-35 M SSL	L304	87-003-147-080		COIL,22UH
△ C611	87-010-976-080		CAP,CER 1000P-500 B	L305	87-003-295-080		COIL,10UH
△ C612	87-010-974-080		CAP,CER 220P-500 B	L306	87-003-147-080		COIL,22UH
C616	87-A10-674-090		CAP,M/P 0.47-250 J	L501	87-005-608-080		COIL,33UH J LAV35
C701	87-016-633-080		CAP, E 1-50 SSL	L601	86-LBN-623-010		COIL,HLC 6LB-22
C702	87-016-637-080		CAP, E 10-50 SSL	L603	87-A50-040-010		COIL,2.2MH
C703	87-016-637-080		CAP, E 10-50 SSL	L802	87-A50-170-010		COIL,390UH RCH106
C705	87-016-637-080		CAP, E 10-50 SSL	L803	87-005-608-080		COIL,33UH J LAV35
C706	87-016-637-080		CAP, E 10-50 SSL	△ LF801	87-JB8-650-010		FLTR,LINE SS24H-K18055
C707	87-016-633-080		CAP, E 1-50 SSL	△ P801	87-A30-096-010		P-COUPLER,TLP721F
C708	87-016-637-080		CAP, E 10-50 SSL	△ P802	87-A30-096-010		P-COUPLER,TLP721F
C709	87-016-637-080		CAP, E 10-50 SSL	△ PR601	87-035-495-080		FUSE,0.75A 125V F 251
C715	87-016-633-080		CAP, E 1-50 SSL	△ PR801	87-A90-409-080		FUSE,1.5A 125V A 251
C716	87-016-634-080		CAP, E 2.2-50 SSL	△ PR802	87-026-690-080		FUSE,5A 125V 251
△ C801	87-A10-688-090		CAP,M/P 0.22-275 K(B81133)	△ PR803	87-A91-526-080		FUSE,0.375A 125V F251
△ C802	87-A10-688-090		CAP,M/P 0.22-275 K(B81133)	R327	87-A00-161-090		RES,M/F 47-2W J RSF(S)
C808	87-A11-941-090		CAP, E 220-400 KMH(25.4*40)	R401	87-A00-150-090		RES,M/F 220-1W J RSF(S)
C809	87-016-584-080		CAP, E 220-25 SSL	R402	87-A00-150-090		RES,M/F 220-1W J RSF(S)
C810	87-A10-728-080		CAP, E 680-10 M LXV	R406	87-029-158-060		RES,FUSE 1-1W J
C811	87-018-131-080		CAP,CER 1000P-50V	R407	87-029-158-060		RES,FUSE 1-1W J
C812	87-A10-645-010		CAP,M/P 0.01-1K J MMH	R503	87-025-429-080		RES,M/F 47K-1/6W F
C813	87-012-372-010		CAP,CER 1000P-2K	R507	87-A00-214-090		RES,M/F 1.5-1W J RSF(S)
△ C814	87-A11-324-090		CAP,M/P 1000P-1.6K H ECWH(VB)	R603	87-A00-247-090		RES,M/F 100-3W J RSF
C815	87-012-397-010		CAP,CER 1000P-2K BN	R605	87-A00-300-090		RES,M/F 2.2-1W J RSF(F)
C816	87-A10-731-090		CAP, E 220-160 M KMF	R610	87-A00-225-090		RES,M/F 2.2K-5W J RSV5
C817	87-A10-756-090		CAP, E 100-160 M KMF	R611	87-A00-196-090		RES,M/F 0.47-1/2W J RSF(S)
C819	87-016-576-080		CAP, E 330-16 SSL	R804	87-A00-224-090		RES,SD 8.2M-1W J CE
C821	87-016-588-090		CAP, E 2200-25 SSL	R805	87-A00-333-090		RES,M/F 100K-3W J RSS
C822	87-016-587-090		CAP, E 1000-25 M SSL	R806	87-A00-287-090		RES,CEM 0.33-5W K RGC5
C823	87-016-627-080		CAP, E 47-16 SSL	R807	87-A00-333-090		RES,M/F 100K-3W J RSS
C824	87-016-583-080		CAP, E 100-25 SSL	R808	87-A00-243-090		RES,M/F 22-1W J RSF(S)
C825	87-A10-469-080		CAP,CER 2200P-500 K B DD10	R809	87-A00-332-090		RES,CEM 1-10W J RGC
CF201	84-LB3-627-010		FLTR,FSFH 4.5MDB SIF	R810	87-A00-332-090		RES,CEM 1-10W J RGC
CF202	84-LB3-626-010		FLTR,TPS4.5MB2	R812	87-A00-170-090		RES,M/F 82K-3W J RSF(S)
CN401	87-049-469-010		CONN,4P V WHT EH	R815	87-A00-199-090		RES,M/F 12K-3W J RSF(S)
CN601	87-099-675-010		CONN,5P V V	R816	87-A00-223-090		RES,M/F 47K-2W J RSF(S)
CN801	87-099-454-010		CONN,2P TV-50 EYLET	SF201	87-A90-694-010		FLTR,SAW TSF1239P
△ CN802	87-099-674-010		CONN,2P VA V	SFR151	87-024-430-080		SFR,2.2K H RH063MC
D1	87-070-110-010		LED,SLP-181B-51 RED	SFR201	87-024-433-080		SFR,10K H RH063MC
△ F801	87-035-489-010		FUSE,4A 125V T237	SFR301	87-024-431-080		SFR,3.3K H RH063MC
FB801	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	SFR302	87-024-434-080		SFR,22K H RH063MC
FB802	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	SFR303	87-024-434-080		SFR,22K H RH063MC
FB803	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	SFR501	87-A90-385-080		SFR,22K H DIA6 EVM
FB804	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	SW2	87-A90-712-080		SW,TACT EVQ11L07K
FB805	87-003-320-080		F-BEAD,-9.0 FBR07HA121NB-00	SW3	87-A90-712-080		SW,TACT EVQ11L07K
△ FC801	87-033-213-080		FUSE CLAMP,PFC5000	SW4	87-A90-712-080		SW,TACT EVQ11L07K
△ FC802	87-033-213-080		FUSE CLAMP,PFC5000	SW5	87-A90-712-080		SW,TACT EVQ11L07K
FR601	87-A00-063-060		RES,FUSE 2.2-1/2W J R-TYPE	SW6	87-A90-712-080		SW,TACT EVQ11L07K
FR602	87-A00-478-090		RES,FUSE 2.2-1W J	SW7	87-A90-712-080		SW,TACT EVQ11L07K
FR604	87-A00-051-060		RES,FUSE 2.7-1W J R-TYPE	SW501	87-A90-567-010		SW,LVR 4-1-3 EVRAAL10
FR605	87-A00-275-090		RES,FUSE 2.2K-1W J R-TYPE	△ SW801	87-A90-364-010		SW,PUSH SDDLB1-C-D-2
FR801	87-A00-081-090		RES,FUSE 1-1/2W	△ T601	87-JBC-610-110		FBT,HFT3601 (HOT)
HL1	84-LB3-216-010		HLDL,LED	△ T602	85-JT2-653-010		PT,HDT-TV141-2
J401	87-A60-420-010		JACK,3.5 ST(MSC)	△ T801	87-JBC-627-110		PT,SWT 7JB
J701	87-A60-322-110		JACK,PIN 3P Y-W-R W/SW	△ TH801	87-A90-830-010		POS-THMS,PTH451C463BF9R0Q270
J702	8Z-JBH-616-010		JACK,PIN 3P Y	TU101	87-A90-660-010		TU UNIT,BTP-AB455
L1	87-005-614-080		COIL,100UH LAV35 J	X1	87-030-212-080		VIB,CER 8.000MHZ CST
L2	87-005-614-080		COIL,100UH LAV35 J	X301	87-A70-007-080		VIB,XTAL 3.58MHZ AQC-1001
L101	87-005-614-080		COIL,100UH LAV35 J	X302	87-A70-017-010		VIB,CER 503KHZ F45
L102	87-005-608-080		COIL,33UH J LAV35				
L201	84-LB2-684-010		COIL,TRAP 47.25MHZ SA				

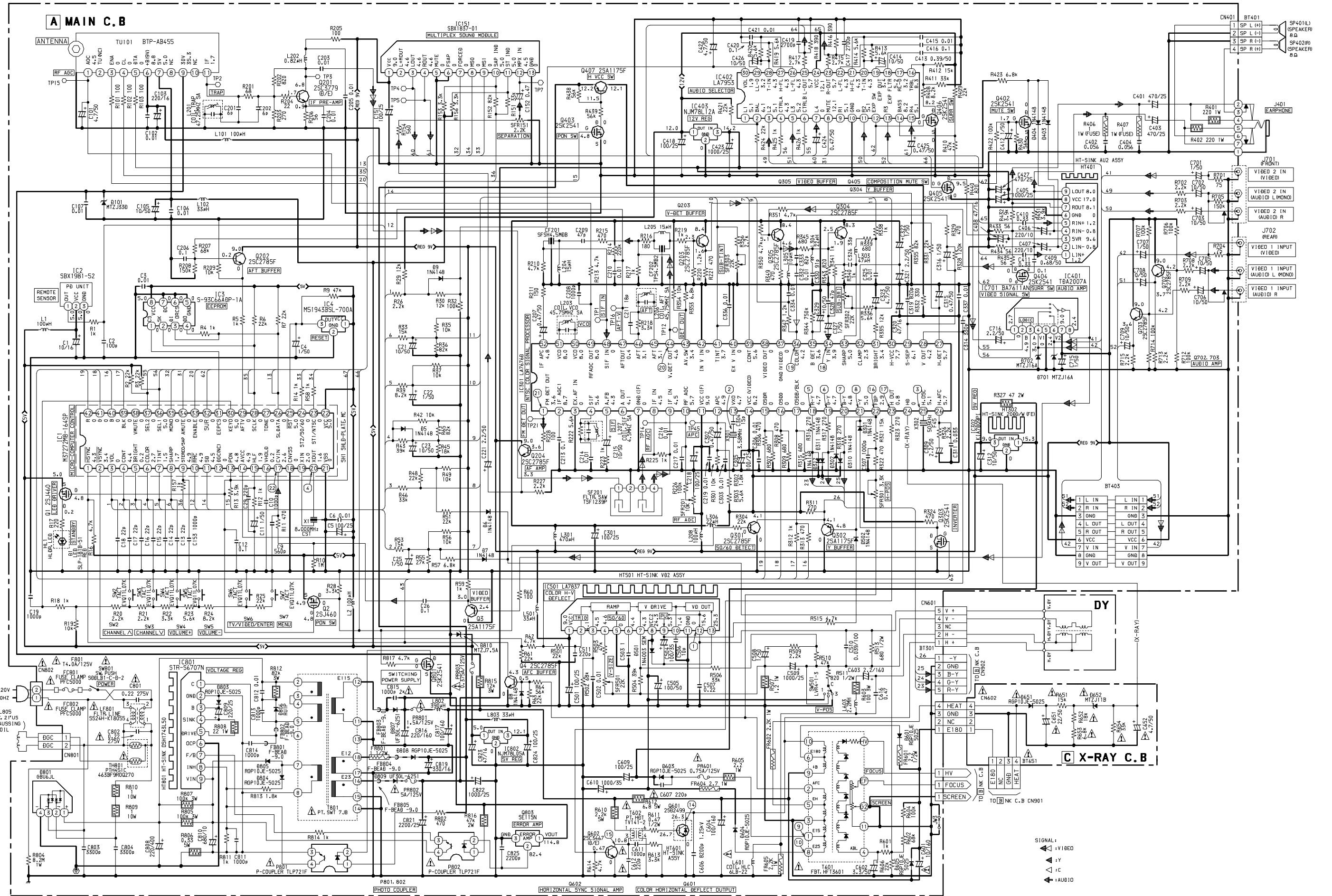
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
NK C.B				SFR901	87-024-519-080	SFR, 470 DIA6 V NTP	
C901	87-018-129-080	CAP, TCU 680P-50 KB		SFR902	87-024-519-080	SFR, 470 DIA6 V NTP	
C902	87-018-129-080	CAP, TCU 680P-50 KB		SFR903	87-024-520-080	SFR, 1K V RH063LC	
C903	87-018-129-080	CAP, TCU 680P-50 KB		SFR904	87-024-520-080	SFR, 1K V RH063LC	
△ C905	87-012-397-010	CAP, CER 1000P-2K BN		SFR905	87-024-520-080	SFR, 1K V RH063LC	
CN901	87-049-469-010	CONN, 4P V					X-RAY C.B
CN902	87-009-033-010	CONN, 5P		△ BT651	87-JBC-626-010	CONN ASSY, 4P V WHT TV-NK	
CN903	87-A60-485-010	CONN, 2P V LV GRA		△ C651	87-016-638-080	CAP, E 22-50 SSL	
L901	87-005-615-080	COIL, 120UH J LAV35		△ C652	87-016-636-080	CAP, E 4.7-50 SSL	
R904	87-A00-165-090	RES, M/F 15K-2W J RSF(S)		△ CN602	8Z-JB1-610-010	CONN, 4P TXB TO B	
R905	87-A00-165-090	RES, M/F 15K-2W J RSF(S)		△ R651	87-025-380-080	RES, M/F 15K-1/6W F	
R906	87-A00-165-090	RES, M/F 15K-2W J RSF(S)		△ R652	87-025-381-080	RES, M/F 18K-1/6W F	
R907	87-025-355-080	RES, M/F 100-1/6W F		△ R653	88-121-682-080	RES, 6.8K-1/8W J	
S901	84-LB3-610-010	SOCKET, CRT 9P HPS1171		△ R654	88-121-333-080	RES, 3.3K-1/8W J	

⚠ Safety Components Symbol

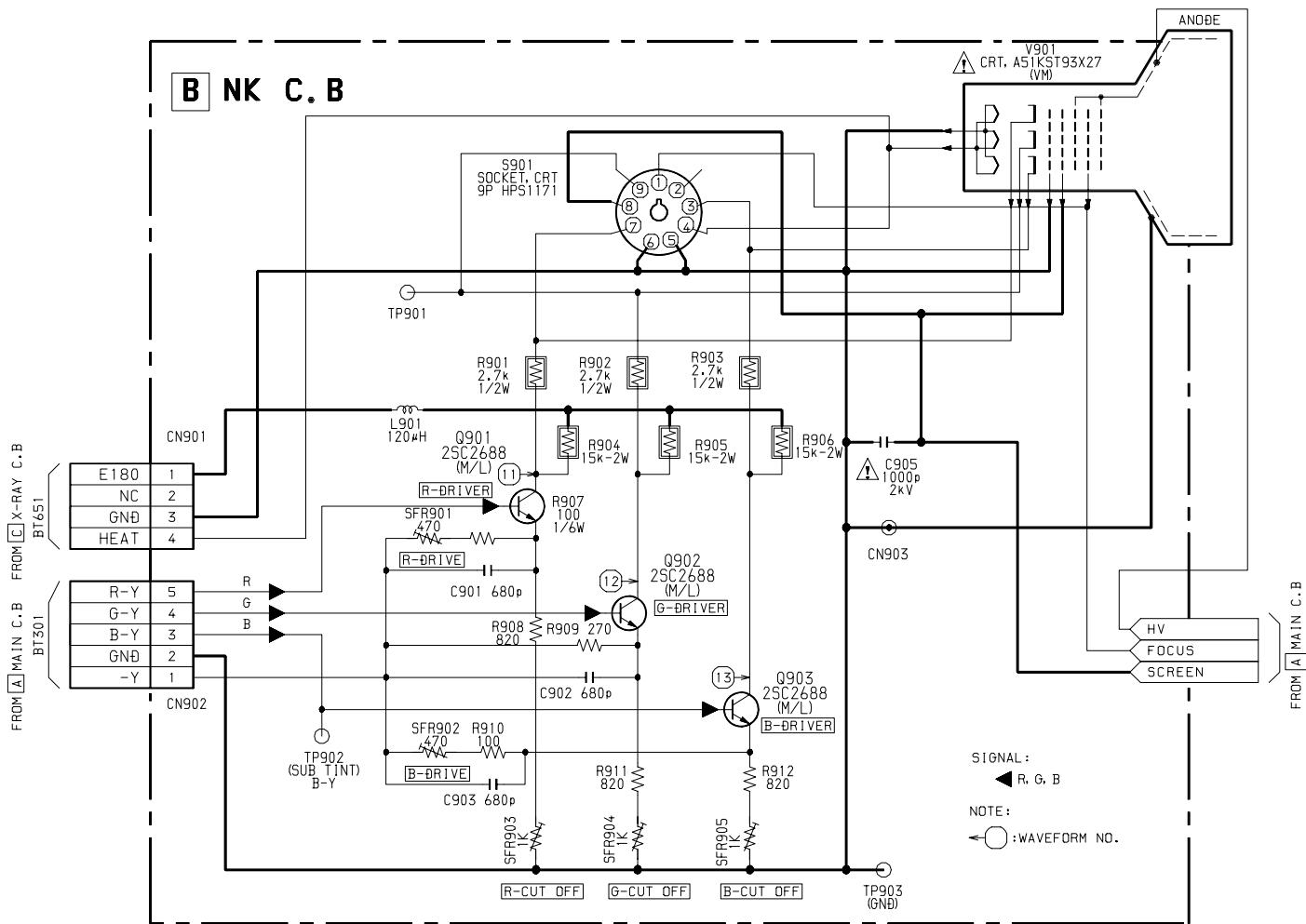
This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special Safety Specifications.

Therefore, when replacing a component with this symbol make absolutely sure that you use a designated part.

SCHEMATIC DIAGRAM – 1 (MAIN)



SCHEMATIC DIAGRAM – 2 (NK)





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